APPENDIX A

BENCHMARK CHARACTERISTIC ANALYSIS OF DATA FROM FIXED STATIONS IN THE UPPER WHITE RIVER WATERSHED 1991 TO 1997

Station: EC-1

	Valid N	Mean	Confid. -95.000%	Confid. +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev.	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	74	196.0676	187.9133	204.2218	202.5	14509	101	261	174	220	160	46	1238.749	35.19586	4.091436	-0.49817	0.279197	0.01462	0.551684
Ammonia (mg/l as N)	75	0.326667	0.247115	0.406219	0.2	24.5	0.05	1.5	0.05	0.5	1.45	0.45	0.11955	0.345759	0.039925	1.549029	0.2774	2.067485	0.548211
BOD (mg/l)	35	2.805714	2.235094	3.376335	2.4	98.2	0.5	6.7	1.7	3.8	6.2	2.1	2.759378	1.661138	0.280784	0.864851	0.397694	0.001138	0.777794
COD (mg/l)	75	19.516	17.92232	21.10968	18	1463.7	9.4	48	14.7	22.4	38.6	7.7	47.97839	6.926643	0.79982	1.786555	0.2774	4.291279	0.548211
Cyanide (mg/l)	73	0.006411	0.005747	0.007075	0.005	0.468	0.005	0.021	0.005	0.007	0.016	0.002	8.11E-06	0.002847	0.000333	3.037395	0.281029	11.11063	0.555223
Nitrate (mg/l as N)	75	2.767333	2.493878	3.040789	2.6	207.55	0.05	5.9	2.2	3.6	5.85	1.4	1.412601	1.188529	0.137239	0.285304	0.2774	0.313463	0.548211
Total Phosphorus (mg/l as P)	75	0.1794	0.138718	0.220082	0.12	13.455	0.015	1.28	0.08	0.22	1.265	0.14	0.031265	0.176819	0.020417	3.687465	0.2774	19.86874	0.548211
Total Solids (mg/l)	75	492.8933	468.3422	517.4445	493	36967	295	835	408	559	540	151	11386.45	106.7073	12.3215	0.486378	0.2774	0.382044	0.548211
Suspended Solids (mg/l)	75	17.86667	10.70545	25.02788	9	1340	1	204	5	16	203	11	968.7658	31.125	3.594006	4.206077	0.2774	20.24163	0.548211
Dissolved Solids (mg/l)	22	474.8182	423.1574	526.479	476	10446	285	822	395	532	537	137	13576.25	116.5172	24.84154	0.974023	0.490962	2.721614	0.95278
Sulfate (mg/l)	22	59.68182	49.00622	70.35741	60.5	1313	34	145	46	63	111	17	579.7511	24.07802	5.133451	2.299515	0.490962	7.2724	0.95278
TKN (mg/l as N)	75	1.253333	1.112093	1.394574	1.1	94	0.4	3	0.8	1.5	2.6	0.7	0.376847	0.613879	0.070885	1.227951	0.2774	1.000149	0.548211
E. coli (CFU/100ml)	72	4445.278	-871.415	9761.971	260	320060	5	170000	70	860	169995	790	5.12E+08	22625.34	2666.421	6.538817	0.282898	44.40443	0.558831
TOC (mg/l)	22	4.125	3.441756	4.808244	4.1	90.75	0.25	7.8	3.2	4.6	7.55	1.4	2.374702	1.541007	0.328544	0.089131	0.490962	1.836295	0.95278
Hardness (mg/l)	74	274.2568	263.8793	284.6342	280.5	20295	160	368	242	310	208	68	2006.303	44.79177	5.206938	-0.19171	0.279197	-0.484	0.551684
Chloride (mg/l)	22	88.45455	65.83611	111.073	77.5	1946	36	280	58	105	244	47	2602.45	51.01422	10.87627	2.649157	0.490962	9.420759	0.95278
Dissolved Oxygen (mg/l)	58	10.34483	9.871701	10.81795	10.265	600	6.3	14.78	9.1	11.59	8.48	2.49	3.237825	1.799396	0.236272	0.250476	0.31372	-0.31331	0.618136
pH	58	7.992069	7.90346	8.080678	7.995	463.54	7.07	8.71	7.8	8.24	1.64	0.44	0.113568	0.336998	0.04425	-0.42591	0.31372	0.905351	0.618136
Copper (ug/l)	75	8.069333	6.429692	9.708975	5.9	605.2	2	35	4	10	33	6	50.78594	7.126425	0.822889	1.950599	0.2774	3.941053	0.548211
Iron (ug/l)	24	335.4583	196.1615	474.7552	200	8051	91	1400	160	380	1309	220	108822	329.8818	67.33684	2.381237	0.472261	5.477365	0.917777
Zinc (ug/l)	75	15.97	13.4322	18.5078	10	1197.75	2.25	60	10	20	57.75	10	121.6633	11.03011	1.273647	2.179222	0.2774	5.64519	0.548211

Station: EC-7

	Valid N	Mean	Confid. -95.000%	Confid. +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev.	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	76	186.6579	179.5794	193.7364	190	14186	102	256	169.5	209.5	154	40	959.5614	30.97679	3.553281	-0.52322	0.275637	0.224025	0.544804
Ammonia (mg/l as N)	78	0.109615	0.055169	0.164062	0.05	8.55	0.05	1.7	0.05	0.05	1.65	0	0.058315	0.241486	0.027343	5.839856	0.272211	34.74773	0.538176
BOD (mg/l)	36	1.5	1.221106	1.778894	1.45	54	0.5	3.8	0.8	1.9	3.3	1.1	0.679429	0.824275	0.137379	0.824533	0.392544	0.831019	0.768076
COD (mg/l)	78	14.35769	13.28255	15.43283	13.1	1119.9	2.5	35.2	11	17	32.7	6	22.7391	4.768553	0.539932	1.520734	0.272211	4.816245	0.538176
Cyanide (mg/l)	77	0.005299	0.005009	0.005589	0.005	0.408	0.005	0.013	0.005	0.005	0.008	0	1.6E-06	0.001278	0.000146	4.618983	0.273908	21.87523	0.54146
Nitrate (mg/l as N)	78	1.545513	1.309601	1.781425	1.45	120.55	0.05	4.9	0.6	2.4	4.85	1.8	1.094817	1.046335	0.118474	0.619344	0.272211	-0.00849	0.538176
Total Phosphorus (mg/l as P)	78	0.058974	0.045538	0.072411	0.04	4.6	0.015	0.26	0.015	0.07	0.245	0.055	0.003552	0.059595	0.006748	2.026609	0.272211	3.895107	0.538176
Total Solids (mg/l)	77	382.1558	365.7299	398.5818	373	29426	183	710	344	408	527	64	5237.396	72.36986	8.247311	1.475735	0.273908	5.798064	0.54146
Suspended Solids (mg/l)	77	18.15584	8.646432	27.66526	11	1398	2	368	6	18	366	12	1755.344	41.89682	4.774586	7.882048	0.273908	66.14699	0.54146
Dissolved Solids (mg/l)	22	359.2727	331.4352	387.1103	343	7904	272	530	332	375	258	43	3942.017	62.78549	13.38591	1.751765	0.490962	3.669277	0.95278
Sulfate (mg/l)	22	42.86364	32.99177	52.73551	38.5	943	29	140	34	44	111	10	495.7424	22.26527	4.746972	4.307107	0.490962	19.51315	0.95278
TKN (mg/l as N)	78	0.715385	0.63907	0.791699	0.6	55.8	0.4	2.6	0.5	0.8	2.2	0.3	0.114565	0.338475	0.038325	3.002968	0.272211	12.90549	0.538176
E. coli (CFU/100ml)	76	539.7105	258.0155	821.4055	130	41018	5	8000	10	395	7995	385	1519668	1232.748	141.4059	4.093369	0.275637	19.57209	0.544804
TOC (mg/l)	22	3.272727	2.951783	3.593672	3.15	72	2.3	4.9	2.6	3.6	2.6	1	0.523983	0.723866	0.154329	0.83534	0.490962	0.128352	0.95278
Hardness (mg/l)	76	249.5	240.4078	258.5922	246	18962	142	332	223	282	190	59	1583.187	39.78928	4.564143	-0.20761	0.275637	0.07571	0.544804
Chloride (mg/l)	22	51.63636	42.49488	60.77785	47	1136	29	130	44	52	101	8	425.0996	20.61794	4.39576	2.835128	0.490962	10.13399	0.95278
Dissolved Oxygen (mg/l)	61	10.40754	9.950118	10.86496	10.34	634.86	6	16.4	9.32	11.22	10.4	1.9	3.189902	1.78603	0.228678	0.353612	0.30627	1.311178	0.603837
pH	62	7.924355	7.84289	8.005819	7.96	491.31	6.98	8.6	7.8	8.13	1.62	0.33	0.102904	0.320786	0.04074	-0.83108	0.303902	1.280672	0.599288
Copper (ug/l)	24	2.620833	1.991801	3.249865	2	62.9	2	7.4	2	2	5.4	0	2.219112	1.489669	0.304077	2.328608	0.472261	4.548722	0.917777
Iron (ug/l)	24	487.5	288.464	686.536	340	11700	120	2200	225	575	2080	350	222176.1	471.3556	96.21506	2.657032	0.472261	7.717169	0.917777
Zinc (ug/l)	77	9.935714	8.11111	11.76032	10	765.05	2.25	50	5	10	47.75	5	64.62374	8.038889	0.916116	2.782432	0.273908	10.24815	0.54146

Station: EC-21

	Valid N	Mean	Confid. -95.000%	Confid. +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev.	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	75	219.9467	210.0814	229.812	225	16496	76	294	202	249	218	47	1838.511	42.87786	4.951108	-0.85107	0.2774	0.953905	0.548211
Ammonia (mg/l as N)	76	0.076974	0.062349	0.091598	0.05	5.85	0.05	0.4	0.05	0.05	0.35	0	0.004096	0.064	0.007341	2.965673	0.275637	9.789185	0.544804
BOD (mg/l)	37	1.305405	0.999022	1.611789	1.1	48.3	0.5	4.7	0.5	1.4	4.2	0.9	0.844414	0.91892	0.15107	1.979586	0.387589	4.828871	0.758719
COD (mg/l)	76	13.31053	11.91331	14.70774	12	1011.6	2.5	40	9.3	15.8	37.5	6.5	37.38682	6.114476	0.701379	2.000658	0.275637	6.353105	0.544804
Cyanide (mg/l)	74	0.00523	0.00504	0.00542	0.005	0.387	0.005	0.009	0.005	0.005	0.004	0	6.7E-07	0.00082	9.5E-05	3.835966	0.279197	14.07532	0.551684
Nitrate (mg/l as N)	76	3.735526	3.316035	4.155018	3.4	283.9	0.6	8	2.3	4.75	7.4	2.45	3.370054	1.835771	0.210577	0.695294	0.275637	-0.16363	0.544804
Total Phosphorus (mg/l as P)	76	0.097566	0.080922	0.114209	0.07	7.415	0.015	0.31	0.04	0.125	0.295	0.085	0.005305	0.072835	0.008355	1.302773	0.275637	1.028681	0.544804
Total Solids (mg/l)	76	467.4838	444.2818	490.6859	465	35528.77	4.77	713	411.5	524.5	708.23	113	10309.62	101.5363	11.64701	-1.00969	0.275637	4.929472	0.544804
Suspended Solids (mg/l)	76	19.15789	13.76002	24.55577	11.5	1456	2	124	5	24	122	19	558.0014	23.62205	2.709635	2.659942	0.275637	8.363536	0.544804
Dissolved Solids (mg/l)	22	461.5909	425.1884	497.9934	445.5	10155	368	677	391	498	309	107	6740.92	82.10311	17.50444	1.141682	0.490962	0.826716	0.95278
Sulfate (mg/l)	22	50	45.71877	54.28123	48	1100	38	79	43	53	41	10	93.2381	9.655988	2.058663	1.408918	0.490962	2.717886	0.95278
TKN (mg/l as N)	22	0.481818	0.427712	0.535924	0.5	10.6	0.3	0.8	0.4	0.5	0.5	0.1	0.014892	0.122032	0.026017	0.726078	0.490962	1.210283	0.95278
E. coli (CFU/100ml)	73	2126.781	-1416.06	5669.622	190	155255	5	130000	80	370	129995	290	2.3E+08	15184.65	1777.229	8.526258	0.281029	72.7926	0.555223
TOC (mg/l)	22	2.95	2.622825	3.277175	2.65	64.9	1.8	4.3	2.5	3.7	2.5	1.2	0.544524	0.737919	0.157325	0.309347	0.490962	-1.02898	0.95278
Hardness (mg/l)	75	299.28	287.4492	311.1108	308	22446	166	394	274	332	228	58	2644.069	51.42051	5.937529	-0.73318	0.2774	0.207734	0.548211
Chloride (mg/l)	22	72.09091	53.90151	90.28031	61	1586	30	185	41	92	155	51	1683.039	41.02486	8.746529	1.378681	0.490962	1.382385	0.95278
Dissolved Oxygen (mg/l)	61	10.21656	9.740775	10.69234	9.9	623.21	6.67	17.5	9	11.3	10.83	2.3	3.451096	1.857713	0.237856	0.904596	0.30627	2.580118	0.603837
pH	62	7.868065	7.787892	7.948237	7.87	487.82	6.94	8.5	7.74	8.08	1.56	0.34	0.099665	0.315698	0.040094	-0.68266	0.303902	0.804074	0.599288
Copper (ug/l)	32	3.18125	2.521869	3.840631	2	101.8	2	9	2	4.95	7	2.95	3.344798	1.828879	0.323303	1.437821	0.414457	1.630743	0.809371
Iron (ug/l)	23	395.1304	208.5876	581.6733	270	9088	98	2100	160	380	2002	220	186089	431.3804	89.94903	3.178975	0.481337	11.45855	0.934764
Zinc (ug/l)	32	7.475	5.522527	9.427473	6.7	239.2	2.25	20	2.25	10	17.75	7.75	29.32694	5.415435	0.957323	1.164853	0.414457	0.782056	0.809371

Station: FC-6

	Valid N	Mean	Confid. -95.000%	Confid +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev.	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	73	209.4384	203.0327	215.844	208	15289	120	286	192	231	166	39	753.7496	27.4545	3.213306	-0.11826	0.281029	0.776426	0.555223
Ammonia (mg/l as N)	74	0.100676	0.072594	0.128757	0.05	7.45	0.05	0.9	0.05	0.1	0.85	0.05	0.014691	0.121208	0.01409	4.543884	0.279197	26.29901	0.551684
BOD (mg/l)	34	2.3	1.883863	2.716137	2.1	78.2	0.5	5.1	1.5	2.9	4.6	1.4	1.422424	1.192654	0.204539	0.51858	0.403053	-0.35524	0.787898
COD (mg/l)	74	18.16622	16.32564	20.00679	16.15	1344.3	2.5	69	14	21	66.5	7	63.11377	7.944418	0.92352	3.770307	0.279197	22.66515	0.551684
Cyanide (mg/l)	74	0.005405	0.005056	0.005755	0.005	0.4	0.005	0.014	0.005	0.005	0.009	0	2.3E-06	0.001507	0.000175	4.257285	0.279197	18.76676	0.551684
Nitrate (mg/l as N)	74	1.977027	1.720107	2.233947	2	146.3	0.2	5	1	2.7	4.8	1.7	1.229739	1.108936	0.128911	0.423053	0.279197	-0.21463	0.551684
Total Phosphorus (mg/l as P)	74	0.155	0.131857	0.178143	0.12	11.47	0.015	0.46	0.08	0.21	0.445	0.13	0.009978	0.09989	0.011612	1.087216	0.279197	0.622286	0.551684
Total Solids (mg/l)	73	446.3973	405.8542	486.9403	418	32587	298	1790	379	464	1492	85	30195.24	173.7678	20.33798	6.61995	0.281029	50.9588	0.555223
Suspended Solids (mg/l)	73	33.84932	22.47919	45.21944	22	2471	2	354	14	35	352	21	2374.852	48.73245	5.703702	4.87049	0.281029	27.85032	0.555223
Dissolved Solids (mg/l)	22	400.8182	372.4103	429.2261	392.5	8818	308	531	347	430	223	83	4105.203	64.07186	13.66017	0.689459	0.490962	-0.38432	0.95278
Sulfate (mg/l)	22	52.81818	45.99781	59.63855	50	1162	27	79	44	66	52	22	236.632	15.38285	3.279634	0.182447	0.490962	-0.93987	0.95278
TKN (mg/l as N)	74	0.966216	0.874238	1.058194	0.8	71.5	0.5	2.9	0.7	1.1	2.4	0.4	0.15761	0.397001	0.04615	2.405337	0.279197	8.450838	0.551684
E. coli (CFU/100ml)	70	3155.286	-267.001	6577.573	205	220870	5	90000	50	720	89995	670	2.1E+08	14352.73	1715.479	5.681294	0.28675	31.7405	0.566265
TOC (mg/l)	22	3.695455	3.337738	4.053171	3.55	81.3	2.7	6.6	3.4	3.9	3.9	0.5	0.650931	0.806803	0.172011	2.353017	0.490962	7.747405	0.95278
Hardness (mg/l)	74	273.9595	264.2209	283.698	279.5	20273	122	340	250	304	218	54	1766.889	42.03438	4.886397	-0.99896	0.279197	1.720096	0.551684
Chloride (mg/l)	22	48.63636	41.36827	55.90445	46.5	1070	22	83	38	60	61	22	268.7186	16.39264	3.494922	0.386479	0.490962	-0.60174	0.95278
Dissolved Oxygen (mg/l)	59	10.04153	9.593674	10.48938	9.96	592.45	7.07	14.28	8.79	11.23	7.21	2.44	2.953341	1.718529	0.223733	0.355181	0.311176	-0.48018	0.613257
pH	60	7.885833	7.793768	7.977899	7.945	473.15	6.91	8.65	7.795	8.1	1.74	0.305	0.127015	0.356391	0.04601	-0.90723	0.308694	0.928682	0.608492
Copper (ug/l)	35	7.811429	-1.89817	17.52102	2	273.4	2	170	2	4.4	168	2.4	798.9475	28.26566	4.777768	5.886782	0.397694	34.76014	0.777794
Iron (ug/l)	24	765.4167	513.1752	1017.658	495	18370	220	2100	330	1150	1880	820	356834.6	597.3563	121.9349	1.148521	0.472261	-0.0265	0.917777
Zinc (ug/l)	75	13.07267	10.37592	15.76941	10	980.45	2.25	80	8.3	11	77.75	2.7	137.3806	11.72095	1.353418	3.60427	0.2774	15.89606	0.548211

Station: FC-7

	Valid N	Mean	Confid. -95.000%	Confid. +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev.	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	100	191.76	186.5053	197.0147	191.5	19176	110	250	180	210	140	30	701.3156	26.48236	2.648236	-0.62685	0.24138	1.381656	0.478331
Ammonia (mg/l as N)	101	0.071287	0.059414	0.08316	0.05	7.2	0.05	0.4	0.05	0.05	0.35	0	0.003617	0.060144	0.005985	3.6248	0.240216	13.73216	0.476065
BOD (mg/l)	49	2.128571	1.781952	2.475191	1.8	104.3	0.5	5.1	1.3	2.6	4.6	1.3	1.45625	1.206752	0.172393	0.939616	0.339828	0.306798	0.668065
COD (mg/l)	101	16.1198	15.03961	17.19999	15	1628.1	2.5	40	12	19	37.5	7	29.94	5.471746	0.544459	0.956055	0.240216	2.582312	0.476065
Cyanide (mg/l)	100	0.00507	0.004931	0.005209	0.005	0.507	0.005	0.012	0.005	0.005	0.007	0	4.9E-07	0.0007	7E-05	10	0.24138	100	0.478331
Nitrate (mg/l as N)	101	1.416832	1.193484	1.64018	1.3	143.1	0.05	4.5	0.2	2.5	4.45	2.3	1.280014	1.131377	0.112576	0.400219	0.240216	-0.79243	0.476065
Total Phosphorus (mg/l as P)	101	0.064703	0.058664	0.070742	0.06	6.535	0.015	0.14	0.04	0.09	0.125	0.05	0.000936	0.030593	0.003044	0.402245	0.240216	-0.31756	0.476065
Total Solids (mg/l)	100	359.06	352.1996	365.9204	351.5	35906	279	467	333.5	387	188	53.5	1195.431	34.575	3.4575	0.564737	0.24138	0.580447	0.478331
Suspended Solids (mg/l)	100	17.8	15.25271	20.34729	17	1780	2	77	9	22	75	13	164.8081	12.83776	1.283776	1.907036	0.24138	5.29425	0.478331
Dissolved Solids (mg/l)	97	322.4742	316.044	328.9044	320	31280	259	400	298	343	141	45	1017.898	31.90451	3.239412	0.257105	0.244975	-0.55879	0.48533
Sulfate (mg/l)	100	41.21	39.78828	42.63172	40	4121	25	60	37	43.5	35	6.5	51.33929	7.165144	0.716514	0.729243	0.24138	0.991556	0.478331
TKN (mg/l as N)	22	0.668182	0.597896	0.738467	0.7	14.7	0.4	1	0.6	0.8	0.6	0.2	0.02513	0.158524	0.033797	0.185171	0.490962	-0.30225	0.95278
E. coli (CFU/100ml)	96	349.8958	224.66	475.1316	140	33590	5	3900	30	330	3895	300	382030	618.0857	63.08311	3.400669	0.24621	13.57593	0.487732
TOC (mg/l)	21	3.561905	3.287095	3.836714	3.6	74.8	2.3	4.6	3.1	4	2.3	0.9	0.364476	0.603719	0.131742	-0.28675	0.501195	-0.58066	0.971941
Hardness (mg/l)	100	248.89	241.7398	256.0402	250	24889	142	314	225	276	172	51	1298.543	36.03531	3.603531	-0.37659	0.24138	0.238902	0.478331
Chloride (mg/l)	25	33.8	31.4741	36.1259	35	845	20	43	29	36	23	7	31.75	5.634714	1.126943	-0.43684	0.463684	0.199117	0.901721
Dissolved Oxygen (mg/l)	59	9.931017	9.49423	10.3678	9.79	585.93	6.57	15.2	8.83	11.05	8.63	2.22	2.80922	1.676073	0.218206	0.482255	0.311176	0.497391	0.613257
pH	60	7.983	7.900859	8.065141	8.01	478.98	6.96	8.58	7.82	8.21	1.62	0.39	0.101106	0.317972	0.04105	-1.0558	0.308694	1.722748	0.608492
Copper (ug/l)	35	2.825714	2.336048	3.315381	2	98.9	2	7.4	2	4.1	5.4	2.1	2.031966	1.425471	0.240949	1.578426	0.397694	1.759884	0.777794
Iron (ug/l)	34	461.4706	335.7898	587.1514	325	15690	150	1700	240	530	1550	290	129746.3	360.2031	61.77432	2.053405	0.403053	4.307661	0.787898
Zinc (ug/l)	38	7.360526	5.258391	9.462662	5.05	279.7	2.25	26	2.25	10	23.75	7.75	40.90191	6.39546	1.037481	1.254614	0.382818	0.744101	0.7497

Station: IWC-9

	Valid N	Mean	Confid. -95.000%	Confid. +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev.	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	77	229.2338	220.178	238.2895	230	17651	120	296	198	259	176	61	1591.866	39.89819	4.546821	-0.43499	0.273908	0.015723	0.54146
Ammonia (mg/l as N)	78	0.088462	0.071719	0.105204	0.05	6.9	0.05	0.4	0.05	0.1	0.35	0.05	0.005514	0.07426	0.008408	2.215522	0.272211	4.699745	0.538176
BOD (mg/l)	37	2.421622	1.677608	3.165635	1.7	89.6	0.5	9	1.1	2.7	8.5	1.6	4.97952	2.231484	0.366854	1.602995	0.387589	1.934219	0.758719
COD (mg/l)	78	16.29641	14.87314	17.71968	14.75	1271.12	2.5	39	12	18.8	36.5	6.8	39.8488	6.31259	0.71476	1.097534	0.272211	1.580973	0.538176
Cyanide (mg/l)	78	0.005167	0.005011	0.005323	0.005	0.403	0.005	0.009	0.005	0.005	0.004	0	4.8E-07	0.000692	7.8E-05	4.359948	0.272211	18.76218	0.538176
Nitrate (mg/l as N)	78	2.978205	2.68449	3.271921	2.7	232.3	0.3	7	2.2	3.8	6.7	1.6	1.697051	1.302709	0.147503	0.768894	0.272211	0.852646	0.538176
Total Phosphorus (mg/l as P)	78	0.242564	0.214424	0.270705	0.215	18.92	0.05	0.61	0.15	0.31	0.56	0.16	0.015578	0.124811	0.014132	0.960414	0.272211	0.555346	0.538176
Total Solids (mg/l)	77	505.8442	486.3058	525.3825	493	38950	344	729	444	551	385	107	7410.239	86.08274	9.810039	0.642698	0.273908	0.236498	0.54146
Suspended Solids (mg/l)	77	22.72727	18.73906	26.71549	20	1750	2	90	11	30	88	19	308.7536	17.57139	2.002445	1.553509	0.273908	3.391741	0.54146
Dissolved Solids (mg/l)	77	470.5844	447.5615	493.6073	461	36235	278	804	404	512	526	108	10289.06	101.435	11.55959	0.754627	0.273908	0.841506	0.54146
Sulfate (mg/l)	76	74.64474	68.27638	81.01309	73	5673	32	145	53	90	113	37	776.6854	27.86908	3.196802	0.697094	0.275637	-0.03561	0.544804
TKN (mg/l as N)	78	0.925641	0.847585	1.003697	0.8	72.2	0.4	2.1	0.7	1.1	1.7	0.4	0.119853	0.346199	0.039199	1.256256	0.272211	1.65022	0.538176
E. coli (CFU/100ml)	73	465.7534	294.8345	636.6723	240	34000	10	4200	120	460	4190	340	536644.2	732.56	85.73967	3.408902	0.281029	12.71963	0.555223
TOC (mg/l)	22	3.695455	3.384797	4.006112	3.55	81.3	2.4	5.1	3.3	4.2	2.7	0.9	0.490931	0.700664	0.149382	0.263382	0.490962	-0.22154	0.95278
Hardness (mg/l)	77	306.8182	295.4759	318.1605	316	23625	178	398	276	338	220	62	2497.23	49.97229	5.694871	-0.57776	0.273908	0.042903	0.54146
Chloride (mg/l)	25	60.892	49.05252	72.73148	56	1522.3	0.3	115	41	82	114.7	41	822.6749	28.68231	5.736462	0.199773	0.463684	-0.35741	0.901721
Dissolved Oxygen (mg/l)	61	10.16803	9.715623	10.62044	9.94	620.25	6.26	16.6	9.2	10.96	10.34	1.76	3.120363	1.766455	0.226171	0.745743	0.30627	2.324002	0.603837
pH	62	7.967742	7.876565	8.058919	8.035	494	6.99	8.53	7.8	8.21	1.54	0.41	0.128903	0.359031	0.045597	-0.87082	0.303902	0.623764	0.599288
Copper (ug/l)	78	3.970513	3.584278	4.356748	4	309.7	2	9	2	5	7	3	2.934574	1.71306	0.193966	0.464809	0.272211	-0.09328	0.538176
Iron (ug/l)	78	781.9231	634.0065	929.8397	615	60990	110	4200	420	940	4090	520	430402.7	656.0509	74.28313	2.771637	0.272211	10.05551	0.538176
Zinc (ug/l)	78	11.51026	10.404	12.61652	10	897.8	5	30	10	11	25	1	24.07444	4.906571	0.55556	1.95126	0.272211	4.116498	0.538176

Station: WR-192

	Valid N	Mean	Confid. -95.000%	Confid. +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev.	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	81	220.4815	210.4762	230.4868	229	17859	61	339	198	249	278	51	2047.453	45.24879	5.027643	-0.98652	0.267302	1.98133	0.528675
Ammonia (mg/l as N)	80	0.1875	0.144297	0.230703	0.1	15	0.05	0.8	0.05	0.25	0.75	0.2	0.03769	0.194139	0.021705	1.455495	0.268909	1.061404	0.531786
BOD (mg/l)	39	3.323077	2.606613	4.039541	2.4	129.6	0.5	11	1.6	4.4	10.5	2.8	4.88498	2.210199	0.353915	1.556929	0.37822	2.991017	0.741
COD (mg/l)	80	20.9625	18.90404	23.02096	20	1677	7	72.5	15	24.45	65.5	9.45	85.56009	9.24987	1.034167	2.562085	0.268909	11.77305	0.531786
Cyanide (mg/l)	81	0.006198	0.005445	0.00695	0.005	0.502	0.005	0.026	0.005	0.006	0.021	0.001	1.2E-05	0.003404	0.000378	4.383773	0.267302	21.12807	0.528675
Nitrate (mg/l as N)	80	2.86125	2.621242	3.101258	2.8	228.9	0.7	5.5	2.05	3.6	4.8	1.55	1.163163	1.0785	0.12058	0.286692	0.268909	-0.37634	0.531786
Total Phosphorus (mg/l as P)	80	0.417625	0.348675	0.486575	0.315	33.41	0.03	1.25	0.205	0.515	1.22	0.31	0.095996	0.309831	0.03464	1.155288	0.268909	0.380492	0.531786
Total Solids (mg/l)	81	567.9012	532.2641	603.5384	524	46000	268	1089	474	633	821	159	25975.14	161.168	17.90756	1.000654	0.267302	1.146951	0.528675
Suspended Solids (mg/l)	81	52.1358	27.58243	76.68917	24	4223	2	936	16	42	934	26	12330.29	111.0419	12.33798	6.670425	0.267302	51.41333	0.528675
Dissolved Solids (mg/l)	21	554.7619	481.1509	628.3729	524	11650	310	933	461	684	623	223	26151.19	161.7133	35.28873	0.566159	0.501195	0.052176	0.971941
Sulfate (mg/l)	21	102.4762	77.60923	127.3432	86	2152	38	240	65	120	202	55	2984.362	54.62931	11.92109	0.987525	0.501195	0.529696	0.971941
TKN (mg/l as N)	21	1.147619	1.01365	1.281588	1.1	24.1	0.8	1.9	0.9	1.3	1.1	0.4	0.086619	0.294311	0.064224	0.806956	0.501195	0.574882	0.971941
E. coli (CFU/100ml)	78	972.1795	557.6268	1386.732	200	75830	5	8400	60	700	8395	640	3380653	1838.655	208.1867	2.552887	0.272211	5.956325	0.538178
TOC (mg/l)	21	4.942857	4.321792	5.563922	4.8	103.8	2.8	9.1	4.3	5.5	6.3	1.2	1.861571	1.364394	0.297735	1.317013	0.501195	3.394251	0.971941
Hardness (mg/l)	81	289.0864	276.1176	302.0552	300	23416	100	421	258	329	321	71	3439.955	58.65113	6.516792	-1.03439	0.267302	1.431102	0.528675
Chloride (mg/l)	21	88.28571	69.80003	106.7714	81	1854	32	180	64	115	148	51	1649.214	40.61052	8.861942	0.485099	0.501195	-0.25036	0.971941
Dissolved Oxygen (mg/l)	62	9.995484	9.595468	10.3955	9.8	619.72	6.92	13.4	8.72	11.21	6.48	2.49	2.481133	1.575161	0.200046	0.137869	0.303902	-0.82005	0.599288
pH	63	7.975714	7.888712	8.062717	7.96	502.47	6.88	8.88	7.81	8.21	2	0.4	0.119341	0.345458	0.043524	-0.40355	0.301589	1.222591	0.594841
Copper (ug/l)	79	6.670886	5.48725	7.854522	6	527	2	38	4	8	36	4	27.92465	5.284378	0.594539	3.697279	0.270545	18.29995	0.534952
Iron (ug/l)	24	852.9167	421.3104	1284.523	420	20470	200	4200	300	810	4000	510	1044743	1022.127	208.6408	2.236616	0.472261	4.560648	0.917777
Zinc (ug/l)	79	18.31392	15.12847	21.49938	17	1446.8	5	100	10	20	95	10	202.253	14.22157	1.600051	4.170995	0.270545	21.06725	0.534952

Station: WR-210

	Valid N	Mean	Confid. -95.000%	Confid +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev.	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	84	230.9167	223.1066	238.7268	240.5	19397	137	290	213.5	257	153	43.5	1295.21	35.98902	3.926724	-0.78992	0.262651	0.058869	0.51966
Ammonia (mg/l as N)	85	0.224706	0.173532	0.275879	0.2	19.1	0.05	1.6	0.05	0.3	1.55	0.25	0.056287	0.237249	0.025733	3.035367	0.261153	13.56955	0.516756
BOD (mg/l)	39	3.105128	2.608255	3.602001	3	121.1	0.5	6.6	1.9	4.4	6.1	2.5	2.349447	1.53279	0.245443	0.491052	0.37822	-0.44297	0.741
COD (mg/l)	85	21.82235	19.44921	24.1955	20	1854.9	7	81.2	15	25.6	74.2	10.6	121.0508	11.00231	1.193368	2.561495	0.261153	10.42323	0.516756
Cyanide (mg/l)	85	0.007835	0.006765	0.008906	0.005	0.666	0.002	0.033	0.005	0.009	0.031	0.004	2.5E-05	0.004964	0.000538	2.610205	0.261153	8.685725	0.516756
Nitrate (mg/l as N)	85	3.038824	2.785394	3.292254	2.9	258.3	1.1	7.3	2.3	3.7	6.2	1.4	1.380499	1.174946	0.127441	1.081618	0.261153	2.114187	0.516756
Total Phosphorus (mg/l as P)	85	0.512	0.423698	0.600302	0.38	43.52	0.06	1.75	0.22	0.67	1.69	0.45	0.167595	0.409383	0.044404	1.250223	0.261153	0.805038	0.516756
Total Solids (mg/l)	84	611.4643	562.3944	660.5342	541	51363	2	1590	475.5	687	1588	211.5	51127.82	226.1146	24.67113	1.377811	0.262651	4.106052	0.51966
Suspended Solids (mg/l)	84	64.0119	24.48822	103.5356	21	5377	2	1420	12	37.5	1418	25.5	33169.75	182.1256	19.87154	6.187	0.262651	41.65957	0.51966
Dissolved Solids (mg/l)	21	604.3333	516.0995	692.5672	591	12691	265	1035	479	682	770	203	37573.03	193.8376	42.29884	0.524588	0.501195	0.110797	0.971941
Sulfate (mg/l)	21	115.381	87.48511	143.2768	110	2423	29	270	68	140	241	72	3755.648	61.28334	13.37312	0.872422	0.501195	0.71767	0.971941
TKN (mg/l as N)	85	1.351765	1.222065	1.481464	1.3	114.9	0.4	3.8	1	1.5	3.4	0.5	0.361574	0.60131	0.065221	1.71866	0.261153	4.330171	0.516756
E. coli (CFU/100ml)	80	1541.813	760.9022	2322.723	365	123345	5	22000	105	1100	21995	995	1.2E+07	3509.093	392.3285	4.12618	0.268909	18.91204	0.531786
TOC (mg/l)	21	4.833333	4.216829	5.449838	4.7	101.5	2.8	7.8	3.9	5.6	5	1.7	1.834333	1.354376	0.295549	0.510719	0.501195	-0.34368	0.971941
Hardness (mg/l)	84	305.6071	294.0691	317.1452	313.5	25671	164	394	273	338.5	230	65.5	2826.772	53.16739	5.801038	-0.59137	0.262651	-0.10473	0.51966
Chloride (mg/l)	21	104.5238	81.30772	127.7399	96	2195	30	210	65	125	180	60	2601.262	51.00257	11.12967	0.539116	0.501195	-0.34354	0.971941
Dissolved Oxygen (mg/l)	62	9.855161	9.450884	10.25944	9.8	611.02	6.27	13.46	8.77	11	7.19	2.23	2.534275	1.591941	0.202177	-0.06469	0.303902	-0.31071	0.599288
pH	63	7.818413	7.727972	7.908853	7.8	492.56	6.61	8.63	7.6	8.09	2.02	0.49	0.128959	0.359108	0.045243	-0.38963	0.301589	1.348301	0.594841
Copper (ug/l)	84	7.416667	6.145114	8.68822	6	623	2	43	4	8.45	41	4.45	34.33177	5.859332	0.639305	3.366373	0.262651	16.41959	0.51966
Iron (ug/l)	84	1956.548	665.29	3247.805	570	164350	90	50000	365	1150	49910	785	3.5E+07	5950.131	649.2125	6.895587	0.262651	53.12606	0.51966
Zinc (ug/l)	84	23.30357	18.20533	28.40181	20	1957.5	8.5	190	10	20	181.5	10	551.9097	23.49276	2.56327	4.888154	0.262651	31.01522	0.51966

Station: WR-248

	Valid N	Mean	Confid. -95.000%	Confid. +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev.	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	79	233.1266	224.0943	242.1588	240	18417	123	297	201	261	174	60	1626.086	40.32476	4.53689	-0.63631	0.270545	0.04503	0.534952
Ammonia (mg/l as N)	80	0.09375	0.077878	0.109622	0.05	7.5	0.05	0.4	0.05	0.1	0.35	0.05	0.005087	0.071323	0.007974	1.835817	0.268909	3.585569	0.531786
BOD (mg/l)	37	2.118919	1.462736	2.775101	1.7	78.4	0.5	9.7	1	2.8	9.2	1.8	3.873243	1.968056	0.323546	2.384625	0.387589	6.827939	0.758719
COD (mg/l)	80	15.425	14.06479	16.78521	14	1234	2.5	34.4	11.25	17.85	31.9	6.6	37.35937	6.112231	0.683368	0.960684	0.268909	0.847583	0.531786
Cyanide (mg/l)	1	0.005				0.005	0.005	0.005											
Nitrate (mg/l as N)	80	3.17125	2.887248	3.455252	2.8	253.7	0.7	7.2	2.4	3.9	6.5	1.5	1.628657	1.276188	0.142682	0.98046	0.268909	1.112389	0.531786
Total Phosphorus (mg/l as P)	80	0.260875	0.229159	0.292591	0.22	20.87	0.03	0.62	0.17	0.335	0.59	0.165	0.020312	0.14252	0.015934	0.894775	0.268909	0.082481	0.531786
Total Solids (mg/l)	80	517.85	495.8205	539.8795	497.5	41428	362	934	447	578	572	131	9799.319	98.99151	11.06759	1.225662	0.268909	2.706557	0.531786
Suspended Solids (mg/l)	80	24.8375	19.74182	29.93318	19.5	1987	2	120	9	32	118	23	524.315	22.89793	2.560086	1.989737	0.268909	4.941906	0.531786
Dissolved Solids (mg/l)	24	492.2083	449.6392	534.7775	491.5	11813	331	693	403	568.5	362	165.5	10163.04	100.8119	20.57815	0.237857	0.472261	-0.90202	0.917777
Sulfate (mg/l)	23	81.95652	67.63958	96.27346	81	1885	38	155	54	100	117	46	1096.134	33.10792	6.903479	0.519832	0.481337	-0.5795	0.934764
TKN (mg/l as N)	23	0.830435	0.703062	0.957807	0.8	19.1	0.3	1.4	0.6	1	1.1	0.4	0.086759	0.294549	0.061418	0.689788	0.481337	0.069658	0.934764
E. coli (CFU/100ml)	77	551.6234	294.7317	808.515	220	42475	5	8000	80	550	7995	470	1281017	1131.82	128.9829	4.862961	0.273908	27.27407	0.54146
TOC (mg/l)	23	3.643478	3.23535	4.051606	3.6	83.8	1.4	5.7	3	4.3	4.3	1.3	0.890751	0.943796	0.196795	-0.0848	0.481337	0.643907	0.934764
Hardness (mg/l)	79	311.5316	300.2261	322.8372	324	24611	186	388	282	342	202	60	2547.611	50.47387	5.678754	-0.68309	0.270545	-0.02877	0.534952
Chloride (mg/l)	23	62.95652	51.14011	74.77293	56	1448	29	110	40	90	81	50	746.6798	27.32544	5.697749	0.423236	0.481337	-1.22711	0.934764
Dissolved Oxygen (mg/l)	62	10.31371	9.850206	10.77721	10.3	639.45	6.4	15.1	9.06	11.59	8.7	2.53	3.331204	1.825159	0.231795	0.171986	0.303902	-0.14039	0.599288
pH	63	7.985714	7.902703	8.068726	8.02	503.1	7	8.6	7.8	8.21	1.6	0.41	0.108644	0.329612	0.041527	-0.77543	0.301589	0.767441	0.594841
Copper (ug/l)	22	3.704545	2.707622	4.701469	2	81.5	2	9.6	2	5	7.6	3	5.055693	2.248487	0.479379	1.187478	0.490962	0.706472	0.95278
Iron (ug/l)	22	880.9091	401.9429	1359.875	505	19380	200	4900	280	730	4700	450	1166990	1080.273	230.315	2.82346	0.490962	9.041928	0.95278
Zinc (ug/l)	22	12.61136	8.937397	16.28533	9.8	277.45	2.25	40	8	16	37.75	8	68.66379	8.286362	1.766658	1.991942	0.490962	5.011243	0.95278

Station: WR-279

	Valid N	Mean	Confid. -95.000%	Confid. +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev.	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	78	242.9872	232.0706	253.9037	257.5	18953	84	341	220	274	257	54	2344.299	48.41796	5.482254	-0.97978	0.272211	0.885321	0.538176
Ammonia (mg/l as N)	78	0.09359	0.07459	0.112589	0.05	7.3	0.05	0.4	0.05	0.1	0.35	0.05	0.007101	0.084269	0.009542	1.927461	0.272211	2.707739	0.538176
BOD (mg/l)	36	2.263889	1.451437	3.076341	1.55	81.5	0.5	12	1	2.45	11.5	1.45	5.765802	2.401208	0.400201	2.605566	0.392544	7.691624	0.768076
COD (mg/l)	78	18.74231	16.27483	21.20978	15	1461.9	8	65	12	20	57	8	119.7695	10.94392	1.239155	2.080979	0.272211	4.492736	0.538176
Cyanide (mg/l)	77	0.005377	0.005075	0.005678	0.005	0.414	0.005	0.014	0.005	0.005	0.009	0	1.8E-06	0.001328	0.000151	4.700768	0.273908	25.37531	0.54146
Nitrate (mg/l as N)	78	2.788462	2.493572	3.083351	2.55	217.5	0.2	9.3	2	3.3	9.1	1.3	1.710644	1.307916	0.148092	1.745212	0.272211	7.152365	0.538176
Total Phosphorus (mg/l as P)	78	0.312564	0.269675	0.355453	0.26	24.38	0.04	0.85	0.16	0.44	0.81	0.28	0.036186	0.190225	0.021539	0.816631	0.272211	0.04532	0.538176
Total Solids (mg/l)	77	555.3117	528.2605	582.3629	528	42759	392	1002	474	617	610	143	14204.59	119.183	13.58216	1.217433	0.273908	1.746478	0.54146
Suspended Solids (mg/l)	77	41.2987	20.97783	61.61957	17	3180	2	720	7	39	718	32	8015.66	89.53022	10.20292	6.099129	0.273908	44.38208	0.54146
Dissolved Solids (mg/l)	21	518.7619	446.6283	590.8955	507	10894	213	756	376	655	543	279	25111.99	158.4676	34.58047	-0.11505	0.501195	-0.97021	0.971941
Sulfate (mg/l)	21	110.4286	81.26784	139.5893	88	2319	21	205	54	170	184	116	4103.957	64.06214	13.9795	0.293826	0.501195	-1.56057	0.971941
TKN (mg/l as N)	22	0.781818	0.63468	0.928956	0.7	17.2	0.3	1.8	0.6	0.8	1.5	0.2	0.11013	0.331858	0.070752	1.671548	0.490962	3.483352	0.95278
E. coli (CFU/100ml)	74	1147.162	634.1488	1660.176	255	84890	5	15000	80	1000	14995	920	4903157	2214.307	257.408	3.953846	0.279197	20.73847	0.551684
TOC (mg/l)	21	4.233333	3.254683	5.211984	3.5	88.9	2.2	12.9	3.2	4.2	10.7	1	4.622333	2.149961	0.46918	3.539867	0.501195	14.42581	0.971941
Hardness (mg/l)	78	320.3333	307.3076	333.3591	340.5	24986	134	412	298	358	278	60	3337.68	57.77265	6.541465	-1.06694	0.272211	0.825212	0.538176
Chloride (mg/l)	21	53.2381	43.51577	62.96042	54	1118	21	89	36	71	68	35	456.1905	21.35862	4.660832	0.080367	0.501195	-1.11775	0.971941
Dissolved Oxygen (mg/l)	57	10.17825	9.642648	10.71384	9.9	580.16	6.12	16.6	8.73	11.6	10.48	2.87	4.074604	2.018565	0.267365	0.496756	0.316327	0.408195	0.623134
pH	59	7.996271	7.913927	8.078615	8.06	471.78	6.93	8.57	7.86	8.19	1.64	0.33	0.099841	0.315976	0.041137	-1.3186	0.311176	2.243661	0.613257
Copper (ug/l)	79	5.506329	4.741346	6.271312	5	435	2	27	4	7	25	3	11.66419	3.415288	0.38425	3.40091	0.270545	19.42203	0.534952
Iron (ug/l)	24	1113.042	440.2244	1785.859	430	26713	80	6500	175	1250	6420	1075	2538799	1593.361	325.2434	2.331911	0.472261	5.460968	0.917777
Zinc (ug/l)	36	18.64167	12.60063	24.68271	14	671.1	5	110	10	20	105	10	318.7774	17.85434	2.975723	4.115987	0.392544	20.24788	0.768076

Station: WR-293

	Valid N	Mean	Confid. -95.000%	Confid. +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev.	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	111	242.9279	233.0488	252.807	254	26965	73	343	223	277	270	54	2758.377	52.52025	4.985001	-1.05715	0.229435	1.179249	0.455044
Ammonia (mg/l as N)	111	0.087838	0.073875	0.1018	0.05	9.75	0.05	0.5	0.05	0.1	0.45	0.05	0.00551	0.074228	0.007045	2.618706	0.229435	8.765752	0.455044
BOD (mg/l)	55	2.136364	1.495859	2.776869	1.6	117.5	0.5	15	1.1	2.2	14.5	1.1	5.613468	2.369276	0.319473	3.812993	0.321742	17.36452	0.633507
COD (mg/l)	110	16.99545	14.96244	19.02847	14	1869.5	2.5	65	11	19	62.5	8	115.7392	10.75821	1.025755	2.299408	0.230448	6.510918	0.457021
Cyanide (mg/l)	109	0.005092	0.004987	0.005197	0.005	0.555	0.005	0.009	0.005	0.005	0.004	0	3.1E-07	0.000553	5.3E-05	6.053781	0.231475	36.1788	0.459025
Nitrate (mg/l as N)	111	2.196847	2.007841	2.385853	2	243.85	0.05	6.6	1.4	2.9	6.55	1.5	1.009649	1.004813	0.095373	0.994388	0.229435	2.277726	0.455044
Total Phosphorus (mg/l as P)	111	0.213333	0.18147	0.245197	0.16	23.68	0.04	0.86	0.09	0.28	0.82	0.19	0.028695	0.169396	0.016078	1.675108	0.229435	2.874891	0.455044
Total Solids (mg/l)	110	557.2455	534.2179	580.273	529.5	61297	381	897	462	615	516	153	14848.94	121.8562	11.61854	1.051261	0.230448	0.683512	0.457021
Suspended Solids (mg/l)	108	44.40741	26.60649	62.20833	14	4796	2	610	6.5	39.5	608	33	8708.3	93.31827	8.979555	4.541919	0.232515	23.73851	0.461055
Dissolved Solids (mg/l)	107	491.3084	464.3032	518.3136	482	52570	198	842	400	573	644	173	19852.22	140.8979	13.62111	0.394321	0.23357	-0.02201	0.463113
Sulfate (mg/l)	110	108.9455	96.93045	120.9605	99	11984	16	300	58	145	284	87	4042.474	63.58045	6.062158	0.891183	0.230448	0.373131	0.457021
TKN (mg/l as N)	110	0.872727	0.772441	0.973014	0.7	96	0.3	3.6	0.6	1	3.3	0.4	0.281635	0.530693	0.0506	2.812231	0.230448	10.83277	0.457021
E. coli (CFU/100ml)	103	1846.019	1058.26	2633.779	270	190140	5	29000	70	2600	28995	2530	1.6E+07	4030.706	397.1572	4.605155	0.237938	25.32868	0.471627
TOC (mg/l)	22	4.304545	3.173868	5.435223	3.8	94.7	2	14.9	3.2	4.5	12.9	1.3	6.503312	2.550159	0.543696	3.683441	0.490962	15.50949	0.95278
Hardness (mg/l)	111	316.3153	304.6127	328.0179	331	35111	128	424	284	359	296	75	3870.654	62.21458	5.905147	-0.93794	0.229435	0.458546	0.455044
Chloride (mg/l)	28	43.23214	36.13312	50.33117	44	1210.5	2.5	75	31	52	72.5	21	335.1756	18.3078	3.459849	-0.03008	0.440524	-0.33668	0.858329
Dissolved Oxygen (mg/l)	59	10.11712	9.582089	10.65215	9.95	596.91	5.63	15.37	8.5	11.9	9.74	3.4	4.215038	2.053056	0.267285	0.103133	0.311176	-0.36303	0.613257
pH	61	7.953279	7.876054	8.030504	8.02	485.15	7.07	8.41	7.8	8.19	1.34	0.39	0.090919	0.301528	0.038607	-0.974	0.30627	0.785243	0.603837
Copper (ug/l)	132	4.888636	4.264462	5.512811	4	645.3	2	25	2	6	23	4	13.14101	3.625054	0.31552	2.75702	0.210831	10.99923	0.418668
Iron (ug/l)	36	1054	396.8756	1711.124	370	37944	87	8300	180	765	8213	585	3771893	1942.136	323.6894	3.104203	0.392544	9.428319	0.768076
Zinc (ug/l)	132	14.69091	12.57034	16.81148	10	1939.2	2.25	90	10	20	87.75	10	151.6773	12.31573	1.071947	3.667546	0.210831	16.8362	0.418668

Station: WR-319

	Valid N	Mean	Confid. -95.000%	Confid. +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev.	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	79	227.2911	216.6558	237.9265	230	17956	86	331	201	258	245	57	2254.517	47.48175	5.342114	-0.50251	0.270545	0.633429	0.534952
Ammonia (mg/l as N)	79	0.08481	0.067669	0.101951	0.05	6.7	0.05	0.5	0.05	0.1	0.45	0.05	0.005856	0.076525	0.00861	3.018589	0.270545	11.28452	0.534952
BOD (mg/l)	39	1.769231	1.300585	2.237876	1.4	69	0.5	5.8	0.5	2.2	5.3	1.7	2.090081	1.445711	0.231499	1.554113	0.37822	1.906851	0.741
COD (mg/l)	79	16.56962	14.63632	18.50292	14	1309	7	52	11	19	45	8	74.49907	8.631284	0.971095	2.007651	0.270545	4.773051	0.534952
Cyanide (mg/l)	78	0.005218	0.005017	0.005419	0.005	0.407	0.005	0.011	0.005	0.005	0.006	0	8E-07	0.000892	0.000101	4.843993	0.272211	25.64516	0.538176
Nitrate (mg/l as N)	79	2.186835	1.767373	2.606298	1.8	172.76	0.05	9	0.6	3.3	8.95	2.7	3.507012	1.872702	0.210695	0.984844	0.270545	0.956815	0.534952
Total Phosphorus (mg/l as P)	79	0.130127	0.100717	0.159536	0.08	10.28	0.015	0.67	0.06	0.13	0.655	0.07	0.017239	0.131298	0.014772	2.436683	0.270545	5.970745	0.534952
Total Solids (mg/l)	79	423.4177	405.666	441.1694	407	33450	298	731	370	449	433	79	6281.018	79.25286	8.916643	1.726417	0.270545	3.9995	0.534952
Suspended Solids (mg/l)	78	36.23077	19.73906	52.72248	13.5	2826	2	538	7	29	536	22	5350.232	73.14528	8.282072	4.96916	0.272211	30.06608	0.538176
Dissolved Solids (mg/l)	77	373.013	354.9267	391.0993	364	28722	190	698	334	408	508	74	6349.724	79.68515	9.080966	1.287236	0.273908	4.132384	0.54146
Sulfate (mg/l)	78	48.58974	44.58617	52.59332	46	3790	15	130	40	53	115	13	315.31	17.75697	2.010581	2.007416	0.272211	6.619303	0.538176
TKN (mg/l as N)	23	0.743478	0.567183	0.919774	0.6	17.1	0.3	1.6	0.4	1	1.3	0.6	0.166206	0.407683	0.085008	0.929538	0.481337	-0.35897	0.934764
E. coli (CFU/100ml)	77	1141.364	537.2214	1745.506	200	87885	5	15000	80	700	14995	620	7084893	2661.748	303.3341	3.588491	0.273908	13.6398	0.54146
TOC (mg/l)	22	4.345455	3.318627	5.372282	4.1	95.6	2.1	13.7	3	4.6	11.6	1.6	5.36355	2.315934	0.493759	3.350258	0.490962	13.53989	0.95278
Hardness (mg/l)	79	291.6962	278.4776	304.9148	302	23044	142	412	254	333	270	79	3482.727	59.01463	6.639665	-0.26306	0.270545	-0.02005	0.534952
Chloride (mg/l)	23	26	22.6682	29.3318	26	598	13	42	20	31	29	11	59.36364	7.70478	1.606558	0.324573	0.481337	-0.55184	0.934764
Dissolved Oxygen (mg/l)	61	9.729344	9.210332	10.24836	9.62	593.49	2	13.7	8.43	11.36	11.7	2.93	4.10672	2.026504	0.259467	-0.62237	0.30627	2.183281	0.603837
pH	62	7.906129	7.835212	7.977046	7.945	490.18	7.04	8.51	7.81	8.11	1.47	0.3	0.077981	0.279252	0.035465	-0.96533	0.303902	1.397439	0.599288
Copper (ug/l)	80	6.42375	1.480166	11.36733	2	513.9	2	200	2	5	198	3	493.4818	22.21445	2.483651	8.596891	0.268909	75.63991	0.531786
Iron (ug/l)	23	1100	456.1307	1733.869	330	25300	110	5200	190	1980	5090	1710	2148636	1465.823	305.6452	1.631464	0.481337	1.655257	0.934764
Zinc (ug/l)	26	7.196154	4.442575	9.949733	4.75	187.1	2.25	26	2.25	10	23.75	7.75	46.47598	6.81733	1.336988	1.41681	0.45556	1.056484	0.886509

Station: WR-348

	Valid N	Mean	Confid. -95.000%	Confid. +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev.	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	78	239.4231	229.3921	249.4541	242	18675	84	329	219	267	245	48	1979.39	44.49034	5.037539	-0.58756	0.272211	1.147774	0.538176
Ammonia (mg/l as N)	78	0.074359	0.061937	0.086781	0.05	5.8	0.05	0.3	0.05	0.05	0.25	0	0.003035	0.055094	0.006238	2.275052	0.272211	4.284555	0.538176
BOD (mg/l)	39	1.248718	0.942825	1.554611	1.1	48.7	0.5	4.8	0.5	1.8	4.3	1.3	0.890459	0.943641	0.151104	1.787381	0.37822	4.241396	0.741
COD (mg/l)	78	14.69103	13.36633	16.01572	13.95	1145.9	2.5	36	10	19	33.5	9	34.52005	5.875376	0.665255	0.858607	0.272211	1.187369	0.538176
Cyanide (mg/l)	77	0.005195	0.004986	0.005403	0.005	0.4	0.005	0.011	0.005	0.005	0.006	0	8.4E-07	0.000918	0.000105	5.461273	0.273908	30.53721	0.54146
Nitrate (mg/l as N)	78	2.980769	2.391036	3.570502	2.8	232.5	0.05	11	0.4	4.6	10.95	4.2	6.841508	2.615628	0.296162	0.709347	0.272211	-0.12008	0.538176
Total Phosphorus (mg/l as P)	78	0.110321	0.082432	0.138209	0.08	8.605	0.015	0.92	0.04	0.13	0.905	0.09	0.0153	0.123691	0.014005	4.302695	0.272211	24.48694	0.538176
Total Solids (mg/l)	78	416.5256	404.4106	428.6407	416	32489	257	611	386	448	354	62	2887.292	53.73352	6.084123	0.355916	0.272211	1.90313	0.538176
Suspended Solids (mg/l)	78	22.21795	16.93186	27.50403	12	1733	2	117	6	29	115	23	549.6792	23.44524	2.65465	1.796057	0.272211	3.325347	0.538176
Dissolved Solids (mg/l)	77	379.2338	366.1734	392.2941	383	29201	180	575	350	404	395	54	3311.024	57.54149	6.557462	0.065066	0.273908	2.472688	0.54146
Sulfate (mg/l)	22	35.27273	31.09737	39.44809	35	776	14	53	29	38	39	9	88.68398	9.417217	2.007757	0.206211	0.490962	0.482171	0.95278
TKN (mg/l as N)	78	0.652564	0.592446	0.712682	0.6	50.9	0.2	1.4	0.4	0.8	1.2	0.4	0.071097	0.266641	0.030191	0.810232	0.272211	-0.02627	0.538176
E. coli (CFU/100ml)	76	1133.421	566.4275	1700.415	390	86140	5	17600	150	995	17595	845	6156680	2481.266	284.6207	4.969254	0.275637	28.71268	0.544804
TOC (mg/l)	22	4.922727	3.553899	6.291555	4	108.3	1.9	15.8	3	6.5	13.9	3.5	9.531364	3.087291	0.658213	2.318582	0.490962	6.711584	0.95278
Hardness (mg/l)	78	304.8974	293.5618	316.233	309.5	23782	110	400	274	335	290	61	2527.73	50.27653	5.692698	-0.80089	0.272211	1.864541	0.538176
Chloride (mg/l)	22	26.63636	23.34239	29.93034	25.5	586	12	44	23	30	32	7	55.19481	7.429321	1.583936	0.496335	0.490962	0.463502	0.95278
Dissolved Oxygen (mg/l)	60	10.03417	9.532729	10.5356	9.95	602.05	5.47	15.44	8.88	10.14	9.97	2.06	3.767845	1.941094	0.250594	0.507537	0.308694	0.901253	0.608492
pH	61	7.899508	7.794829	8.004187	7.98	481.87	6.3	8.61	7.79	8.15	2.31	0.36	0.167055	0.408723	0.052332	-1.3526	0.30627	2.817857	0.603837
Copper (ug/l)	78	3.415385	2.932047	3.898722	2	266.4	2	11	2	4	9	2	4.595604	2.143736	0.24273	1.659967	0.272211	2.40741	0.538176
Iron (ug/l)	78	865.8077	666.4161	1065.199	565	67533	93	4100	270	1100	4007	830	782086.5	884.3565	100.1337	1.809021	0.272211	2.975273	0.538176
Zinc (ug/l)	78	9.253846	8.08686	10.42083	10	721.8	2.25	30	5	10	27.75	5	26.78999	5.175904	0.586056	1.280963	0.272211	2.903026	0.538176

WR-319

	Valid N	Mean	Confid. -95.000%	Confid. +95.000%	Median	Sum	Minimum	Maximum	Lower Quartile	Upper Quartile	Range	Quartile Range	Variance	Std.Dev.	Standard Error	Skewness	Std.Err. Skewness	Kurtosis	Std.Err. Kurtosis
Alkalinity (mg/l)	79	227.2911	216.6558	237.9265	230	17956	86	331	201	258	245	57	2254.517	47.48175	5.342114	-0.50251	0.270545	0.633429	0.534952
Ammonia (mg/l as N)	79	0.08481	0.067669	0.101951	0.05	6.7	0.05	0.5	0.05	0.1	0.45	0.05	0.005856	0.076525	0.00861	3.018589	0.270545	11.28452	0.534952
BOD (mg/l)	39	1.769231	1.300585	2.237876	1.4	69	0.5	5.8	0.5	2.2	5.3	1.7	2.090081	1.445711	0.231499	1.554113	0.37822	1.906851	0.741
COD (mg/l)	79	16.56962	14.63632	18.50292	14	1309	7	52	11	19	45	8	74.49907	8.631284	0.971095	2.007651	0.270545	4.773051	0.534952
Cyanide (mg/l)	78	0.005218	0.005017	0.005419	0.005	0.407	0.005	0.011	0.005	0.005	0.006	0	8E-07	0.000892	0.000101	4.843993	0.272211	25.64516	0.538176
Nitrate (mg/l as N)	79	2.186835	1.767373	2.606298	1.8	172.76	0.05	9	0.6	3.3	8.95	2.7	3.507012	1.872702	0.210695	0.984844	0.270545	0.956815	0.534952
Total Phosphorus (mg/l as P)	79	0.130127	0.100717	0.159536	0.08	10.28	0.015	0.67	0.06	0.13	0.655	0.07	0.017239	0.131298	0.014772	2.436683	0.270545	5.970745	0.534952
Total Solids (mg/l)	79	423.4177	405.666	441.1694	407	33450	298	731	370	449	433	79	6281.016	79.25286	8.916643	1.726417	0.270545	3.9995	0.534952
Suspended Solids (mg/l)	78	36.23077	19.73906	52.72248	13.5	2826	2	538	7	29	536	22	5350.232	73.14528	8.282072	4.96916	0.272211	30.06608	0.538176
Dissolved Solids (mg/l)	77	373.013	354.9267	391.0993	364	28722	190	698	334	408	508	74	6349.724	79.68515	9.080966	1.287236	0.273908	4.132384	0.54146
Sulfate (mg/l)	78	48.58974	44.58617	52.59332	46	3790	15	130	40	53	115	13	315.31	17.75697	2.010581	2.007416	0.272211	6.619303	0.538176
TKN (mg/l as N)	23	0.743478	0.567183	0.919774	0.6	17.1	0.3	1.6	0.4	1	1.3	0.6	0.166206	0.407683	0.085008	0.929538	0.481337	-0.35897	0.934764
E. coli (CFU/100ml)	77	1141.364	537.2214	1745.506	200	87885	5	15000	80	700	14995	620	7084893	2661.746	303.3341	3.588491	0.273908	13.6398	0.54146
TOC (mg/l)	22	4.345455	3.318627	5.372282	4.1	95.6	2.1	13.7	3	4.6	11.6	1.6	5.36355	2.315934	0.493759	3.350258	0.490962	13.53989	0.95278
Hardness (mg/l)	79	291.6962	278.4776	304.9148	302	23044	142	412	254	333	270	79	3482.727	59.01463	6.639665	-0.26306	0.270545	-0.02005	0.534952
Chloride (mg/l)	23	26	22.6682	29.3318	26	598	13	42	20	31	29	11	59.36364	7.70478	1.606558	0.324573	0.481337	-0.55184	0.934764
Dissolved Oxygen (mg/l)	61	9.729344	9.210332	10.24836	9.62	593.49	2	13.7	8.43	11.36	11.7	2.93	4.10672	2.026504	0.259467	-0.62237	0.30627	2.183281	0.603837
pH	62	7.906129	7.835212	7.977046	7.945	490.18	7.04	8.51	7.81	8.11	1.47	0.3	0.077981	0.279252	0.035465	-0.96533	0.303902	1.397439	0.599288
Copper (ug/l)	80	6.42375	1.480166	11.36733	2	513.9	2	200	2	5	198	3	493.4818	22.21445	2.483651	8.596891	0.268909	75.63991	0.531786
Iron (ug/l)	23	1100	466.1307	1733.869	330	25300	110	5200	190	1900	5090	1710	2148636	1465.823	305.6452	1.631464	0.481337	1.655257	0.934764
Zinc (ug/l)	26	7.196154	4.442575	9.949733	4.75	187.1	2.25	26	2.25	10	23.75	7.75	46.47598	6.81733	1.336988	1.41681	0.45556	1.056484	0.886509

APPENDIX B

UPPER WHITE RIVER WATERS ASSESSED IN THE CLEAN WATER ACT SECTION 305(B) REPORT 1996 TO 1998

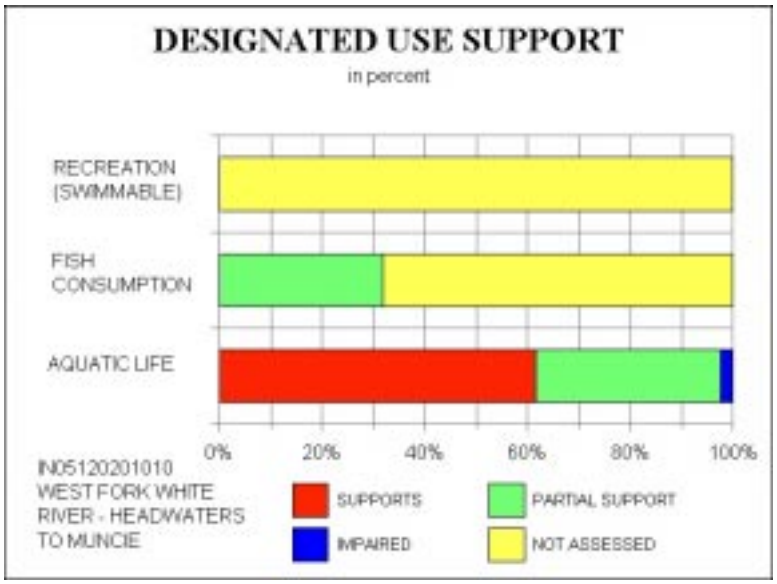
Overall Use Support Status Report
06-04-98

Waterbody ID : **IN05120201010** Segment Number: 00
Waterbody Name: W F WHITE RIVER (HEADWATERS TO MUNCIE)
Waterbody Type: River Size: 163.70 Miles
Basin: WHITE RIVER

Assessment Date: 9804

---------- Use Support ----------

Designated Use	Fully Supp	Threat	Partial Supp	Not Supported	Not Attained	Not Assessed
AQUATIC LIFE SUPPORT	100.90	0.00	58.80	4.00	0.00	0.00
FISH CONSUMPTION	0.00	0.00	52.10	0.00	0.00	111.60
SWIMMABLE	0.00	0.00	0.00	0.00	0.00	163.70



---------- Nonattainment Causes ----------

Cause	Size	Mag
0410-PCBs	52.10	M
0500-METALS	52.10	S
0560-Mercury	52.10	S
0300-PRIORITY ORGANICS	9.00	M

---------- Nonattainment Sources ----------

Source	Size	Mag
9000-SOURCE UNKNOWN	52.10	M

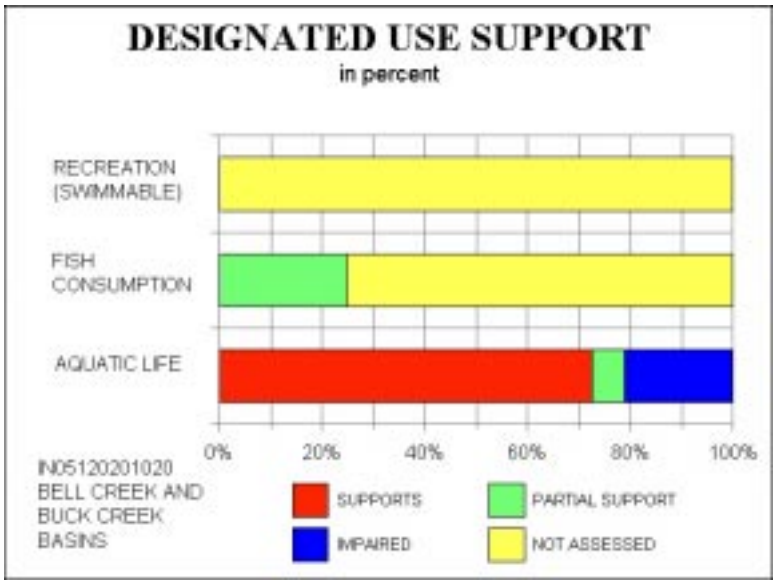
Overall Use Support Status Report
06-04-98

Waterbody ID : **IN05120201020** Segment Number: 00
Waterbody Name: Bell/Buck Creek
Waterbody Type: River Size: 54.90 Miles
Basin: WHITE RIVER

Assessment Date: 9804

---------- Use Support ----------

Designated Use	Fully Supp	Threat	Partial Supp	Not Supported	Not Attained	Not Assessed
AQUATIC LIFE SUPPORT	39.80	0.00	3.60	11.50	0.00	0.00
FISH CONSUMPTION	0.00	0.00	13.70	0.00	0.00	41.20
SWIMMABLE	0.00	0.00	0.00	0.00	0.00	54.90



---------- Nonattainment Causes ----------

Cause	Size	Mag
0300-PRIORITY ORGANICS	13.70	M
0410-PCBs	13.70	M
0000-CAUSE UNKNOWN	15.10	M
0560-Mercury	13.70	M

---------- Nonattainment Sources ----------

Source	Size	Mag
9000-SOURCE UNKNOWN	13.70	M

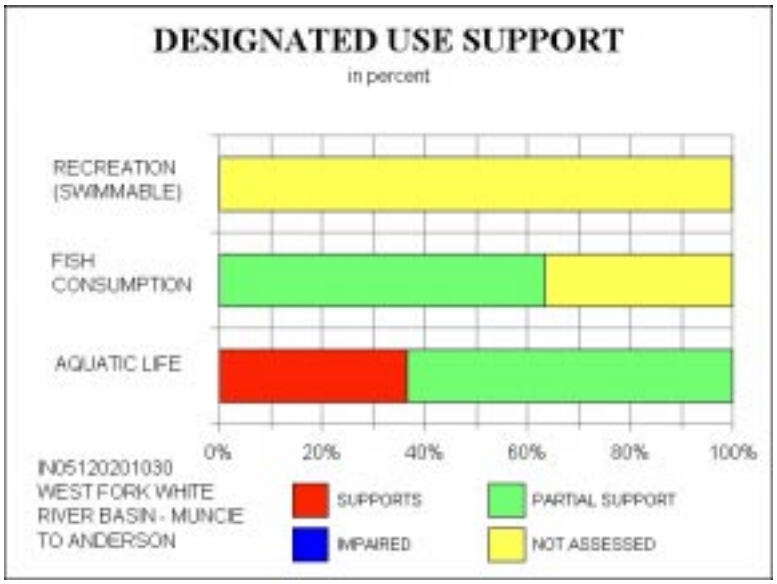
Overall Use Support Status Report
06-04-98

Waterbody ID : **IN05120201030** Segment Number: 00
Waterbody Name: W.F. White River Basin (Muncie to Anderson)
Waterbody Type: River Size: 32.90 Miles
Basin: WHITE RIVER

Assessment Date: 9804

---------- Use Support ----------

Designated Use	Fully Supp	Threat	Partial Supp	Not Supported	Not Attained	Not Assessed
AQUATIC LIFE SUPPORT	12.00	0.00	20.90	0.00	0.00	0.00
FISH CONSUMPTION	0.00	0.00	20.90	0.00	0.00	12.00
SWIMMABLE	0.00	0.00	0.00	0.00	0.00	32.90



---------- Nonattainment Causes ----------

Cause	Size	Mag
0300-PRIORITY ORGANICS	20.90	M
1600-HABITAT ALTER. (non-flow)	20.90	M
0410-PCBs	20.90	M
0560-Mercury	20.90	S

---------- Nonattainment Sources ----------

Source	Size	Mag
9000-SOURCE UNKNOWN	20.90	M

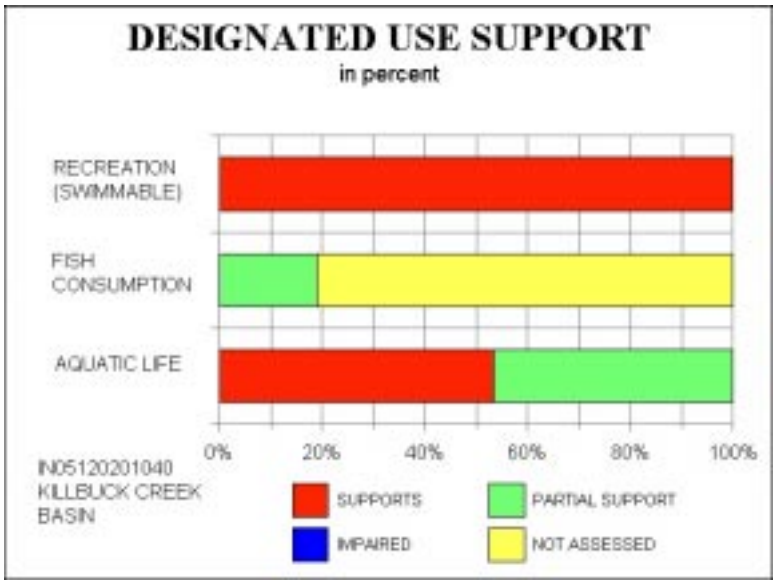
Overall Use Support Status Report
06-04-98

Waterbody ID : **IN05120201040** Segment Number: 00
Waterbody Name: Killbuck Creek Basin
Waterbody Type: River Size: 54.90 Miles
Basin: WHITE RIVER

Assessment Date: 9804

---------- Use Support ----------

Designated Use	Fully Supp	Threat	Partial Supp	Not Supported	Not Attained	Not Assessed
AQUATIC LIFE SUPPORT	29.30	0.00	25.60	0.00	0.00	0.00
SWIMMABLE	54.90	0.00	0.00	0.00	0.00	0.00
FISH CONSUMPTION	0.00	0.00	10.50	0.00	0.00	44.40



---------- Nonattainment Causes ----------

Cause	Size	Mag
0410-PCBs	10.50	M
0560-Mercury	10.50	M

---------- Nonattainment Sources ----------

Source	Size	Mag
9000-SOURCE UNKNOWN	10.50	M

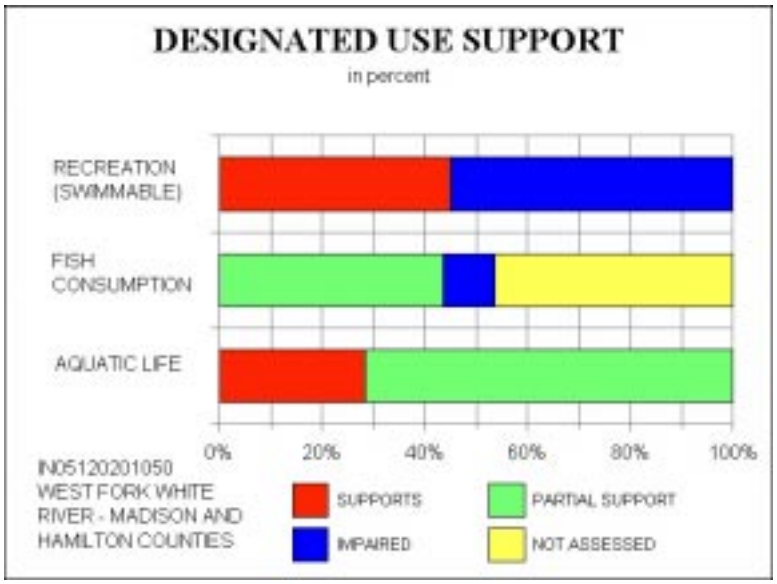
Overall Use Support Status Report
06-04-98

Waterbody ID : **IN05120201050** Segment Number: 00
Waterbody Name: W.F. White River (Madison and Hamilton Counties)
Waterbody Type: River Size: 89.30 Miles
Basin: WHITE RIVER

Assessment Date: 9804

---------- Use Support ----------

Designated Use	Fully Supp	Threat	Partial Supp	Not Supported	Not Attained	Not Assessed
AQUATIC LIFE SUPPORT	25.40	0.00	63.90	0.00	0.00	0.00
FISH CONSUMPTION	0.00	0.00	38.90	8.90	0.00	41.50
SWIMMABLE	40.30	0.00	0.00	49.20	0.00	0.00



---------- Nonattainment Causes ----------

Cause	Size	Mag
0410-PCBs	47.80	M
1600-HABITAT ALTER. (non-flow)	25.00	M
1700-PATHOGENS	49.20	S

---------- Nonattainment Sources ----------

Source	Size	Mag
0110-Major Industrial Point Source	8.90	H
9000-SOURCE UNKNOWN	55.00	S

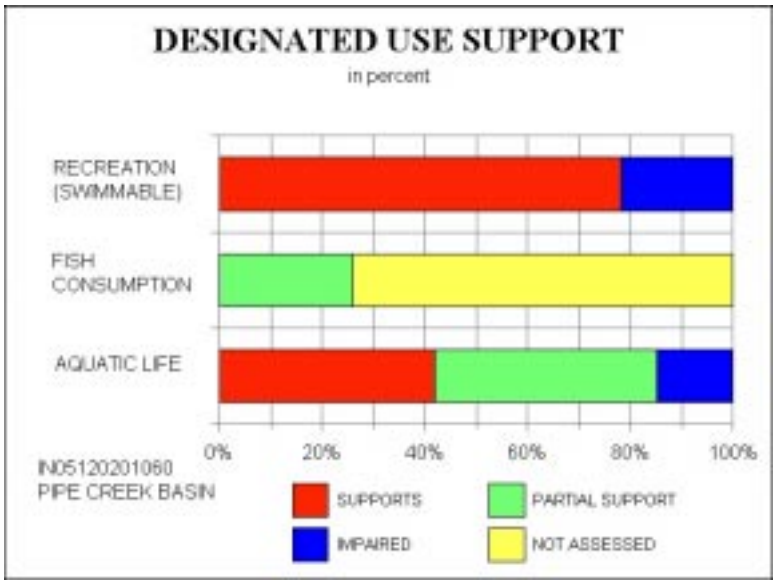
Overall Use Support Status Report
06-04-98

Waterbody ID : **IN05120201060** Segment Number: 00
Waterbody Name: Pipe Creek Basin
Waterbody Type: River Size: 77.00 Miles
Basin: WHITE RIVER

Assessment Date: 9804

---------- Use Support ----------

Designated Use	Fully Supp	Threat	Partial Supp	Not Supported	Not Attained	Not Assessed
AQUATIC LIFE SUPPORT	32.30	0.00	33.40	11.30	0.00	0.00
FISH CONSUMPTION	0.00	0.00	20.00	0.00	0.00	57.00
SWIMMABLE	60.20	0.00	0.00	16.80	0.00	0.00



---------- Nonattainment Causes ----------

Cause	Size	Mag
0410-PCBs	20.00	M
1600-HABITAT ALTER. (non-flow)	33.40	S
1700-PATHOGENS	16.80	S
0500-METALS	20.00	S
0560-Mercury	20.00	S
2400-TOTAL TOXICS	20.00	M

---------- Nonattainment Sources ----------

Source	Size	Mag
9000-SOURCE UNKNOWN	20.00	M

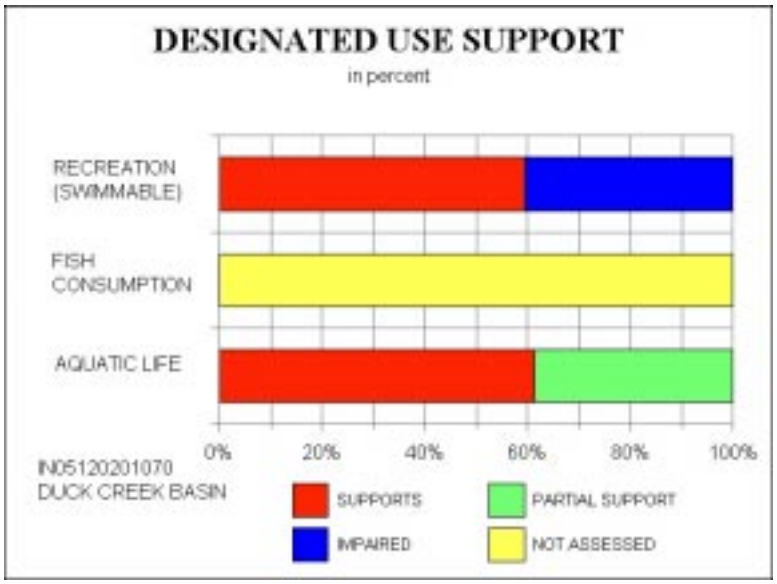
Overall Use Support Status Report
06-04-98

Waterbody ID : **IN05120201070** Segment Number: 00
Waterbody Name: Duck Creek Basin
Waterbody Type: River Size: 62.20 Miles
Basin: WHITE RIVER

Assessment Date: 9804

---------- Use Support ----------

Designated Use	Fully Supp	Threat	Partial Supp	Not Supported	Not Attained	Not Assessed
SWIMMABLE	37.00	0.00	0.00	25.20	0.00	0.00
FISH CONSUMPTION	0.00	0.00	0.00	0.00	0.00	62.20
AQUATIC LIFE SUPPORT	38.20	0.00	24.00	0.00	0.00	0.00



---------- Nonattainment Causes ----------

Cause	Size	Mag
1700-PATHOGENS	25.20	S

---------- Nonattainment Sources ----------

Source	Size	Mag
9000-SOURCE UNKNOWN	25.20	S

Overall Use Support Status Report
06-04-98

Waterbody ID : **IN05120201080** Segment Number: 00
Waterbody Name: Cicero Creek Basin
Waterbody Type: River Size: 177.50 Miles
Basin: WHITE RIVER

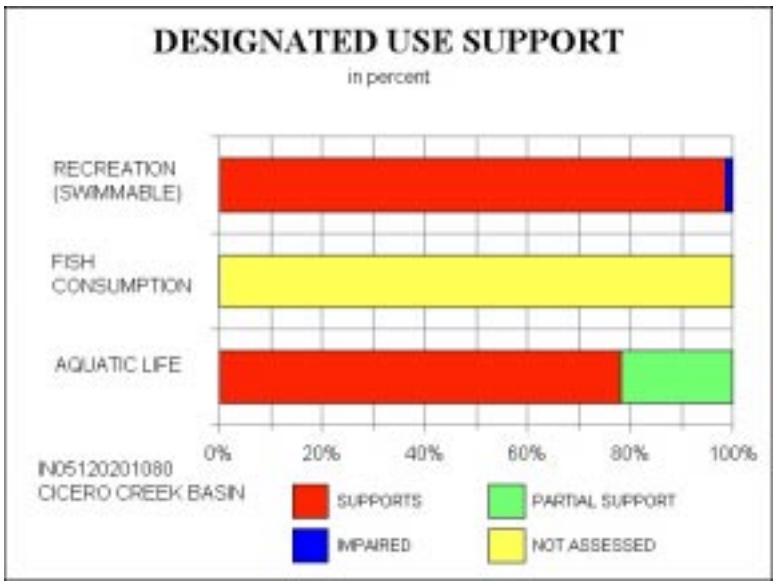
---------- Description of the Waterbody ----------

Does not include Morse Reservoir.

Assessment Date: 9804

---------- Use Support ----------

Designated Use	Fully Supp	Threat	Partial Supp	Not Supported	Not Attained	Not Assessed
AQUATIC LIFE SUPPORT	175.00	0.00	48.70	0.00	0.00	0.00
SWIMMABLE	173.30	0.00	0.00	2.50	0.00	0.00
FISH CONSUMPTION	0.00	0.00	0.00	0.00	0.00	177.50



---------- Nonattainment Causes ----------

Cause	Size	Mag
1700-PATHOGENS	2.50	S

---------- Nonattainment Sources ----------

Source	Size	Mag
9000-SOURCE UNKNOWN	2.50	S

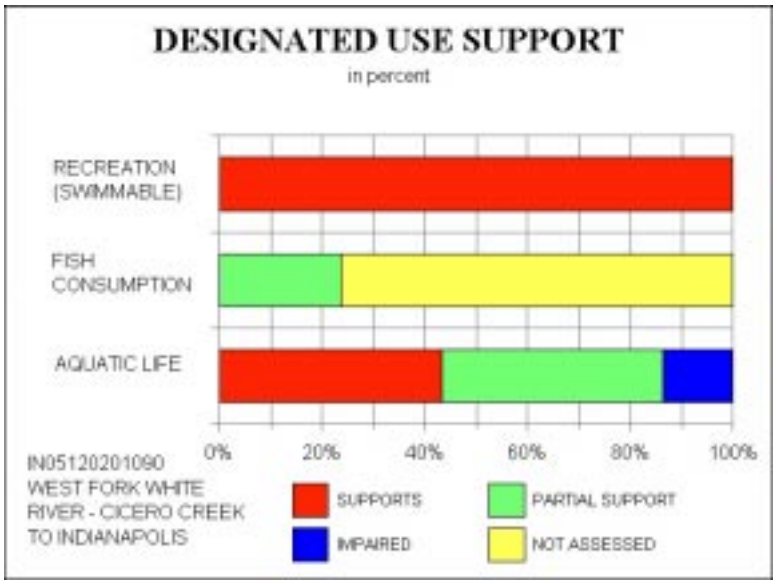
Overall Use Support Status Report
06-04-98

Waterbody ID : **IN05120201090** Segment Number: 00
Waterbody Name: W. F. White River (Cicero Cr to Indianapolis)
Waterbody Type: River Size: 82.30 Miles
Basin: WHITE RIVER

Assessment Date: 9804

---------- Use Support ----------

Designated Use	Fully Supp	Threat	Partial Supp	Not Supported	Not Attained	Not Assessed
AQUATIC LIFE SUPPORT	35.60	0.00	35.40	11.30	0.00	0.00
FISH CONSUMPTION	0.00	0.00	19.46	0.00	0.00	62.80
SWIMMABLE	82.30	0.00	0.00	0.00	0.00	0.00



---------- Nonattainment Causes ----------

Cause	Size	Mag
0410-PCBs	19.50	H
0500-METALS	19.50	S
2400-TOTAL TOXICS	19.50	H

---------- Nonattainment Sources ----------

Source	Size	Mag
9000-SOURCE UNKNOWN	19.50	M

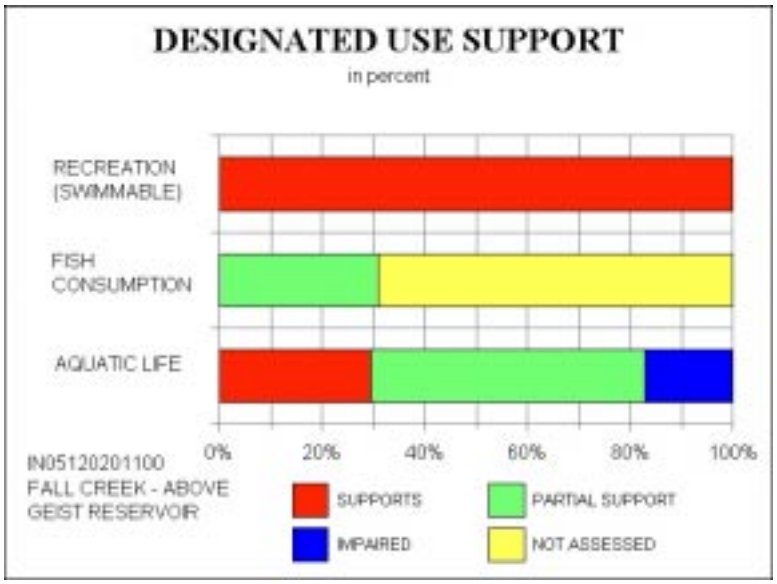
Overall Use Support Status Report
06-04-98

Waterbody ID : **IN05120201100** Segment Number: 00
Waterbody Name: Fall Creek Basin
Waterbody Type: River Size: 99.20 Miles
Basin: WHITE RIVER

Assessment Date: 9804

---------- Use Support ----------

Designated Use	Fully Supp	Threat	Partial Supp	Not Supported	Not Attained	Not Assessed
AQUATIC LIFE SUPPORT	29.30	0.00	52.90	17.00	0.00	0.00
FISH CONSUMPTION	0.00	0.00	30.60	0.00	0.00	68.60
SWIMMABLE	99.20	0.00	0.00	0.00	0.00	0.00



---------- Nonattainment Causes ----------

Cause	Size	Mag
0410-PCBs	30.60	M
0500-METALS	30.60	S
2400-TOTAL TOXICS	30.60	M

---------- Nonattainment Sources ----------

Source	Size	Mag
9000-SOURCE UNKNOWN	30.60	M

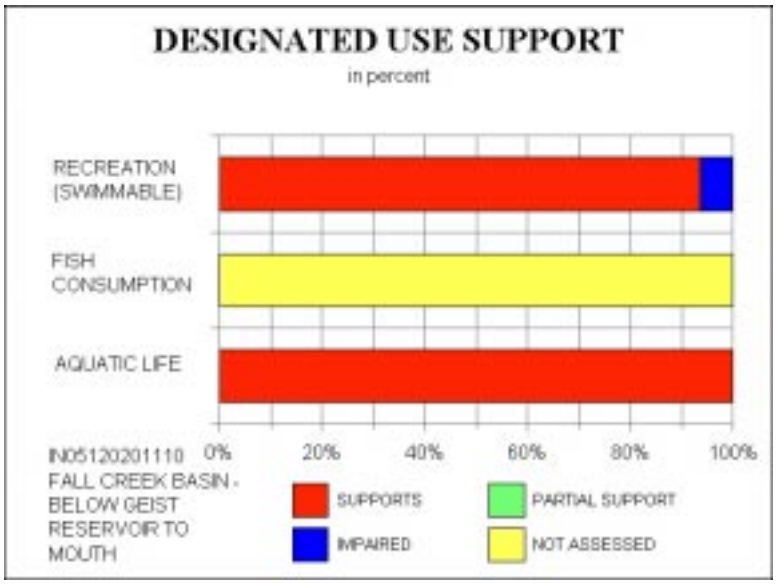
Overall Use Support Status Report
06-04-98

Waterbody ID : **IN05120201110** Segment Number: 00
Waterbody Name: Fall Creek Basin (Geist Reservoir to confl with White River)
Waterbody Type: River Size: 90.90 Miles
Basin: WHITE RIVER

Assessment Date: 9804

---------- Use Support ----------

Designated Use	Fully Supp	Threat	Partial Supp	Not Supported	Not Attained	Not Assessed
AQUATIC LIFE SUPPORT	85.10	5.80	0.00	0.00	0.00	0.00
FISH CONSUMPTION	0.00	0.00	0.00	0.00	0.00	90.90
SWIMMABLE	85.10	0.00	0.00	5.80	0.00	0.00



---------- Nonattainment Causes ----------

Cause	Size	Mag
1700-PATHOGENS	5.80	M

---------- Nonattainment Sources ----------

Source	Size	Mag
0400-COMBINED SEWER OVERFLOW	5.80	M

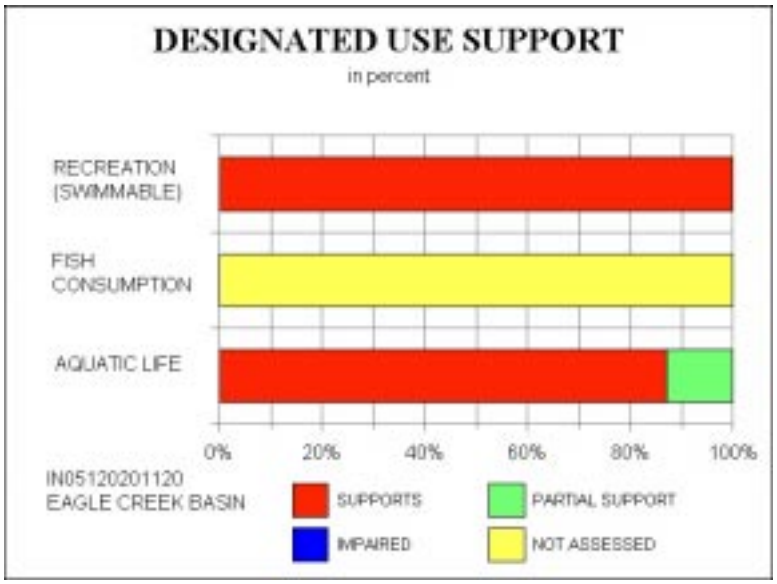
Overall Use Support Status Report
06-04-98

Waterbody ID : **IN05120201120** Segment Number: 00
Waterbody Name: Eagle Creek Basin
Waterbody Type: River Size: 164.20 Miles
Basin: WHITE RIVER

Assessment Date: 9804

---------- Use Support ----------

Designated Use	Fully Supp	Threat	Partial Supp	Not Supported	Not Attained	Not Assessed
AQUATIC LIFE SUPPORT	143.20	0.00	21.00	0.00	0.00	0.00
FISH CONSUMPTION	0.00	0.00	0.00	0.00	0.00	164.20
SWIMMABLE	164.20	0.00	0.00	0.00	0.00	0.00



---------- Nonattainment Causes ----------

Cause	Size	Mag
0000-CAUSE UNKNOWN	21.00	S

---------- Nonattainment Sources ----------

Source	Size	Mag
9000-SOURCE UNKNOWN	21.00	S

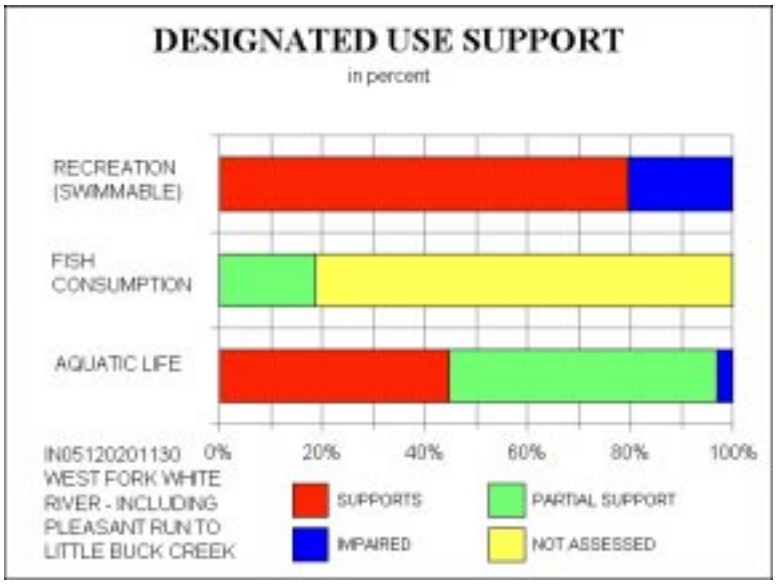
Overall Use Support Status Report
06-04-98

Waterbody ID : **IN05120201130** Segment Number: 00
Waterbody Name: W F WHITE RIVER (INCLUDING PLEASANT RUN TO LITTLE BUCK CR)
Waterbody Type: River Size: 75.20 Miles
Basin: WHITE RIVER

Assessment Date: 9804

---------- Use Support ----------

Designated Use	Fully Supp	Threat	Partial Supp	Not Supported	Not Attained	Not Assessed
AQUATIC LIFE SUPPORT	0.00	33.70	39.20	2.30	0.00	0.00
FISH CONSUMPTION	0.00	0.00	14.10	0.00	0.00	61.10
SWIMMABLE	0.00	59.80	0.00	15.40	0.00	0.00



---------- Nonattainment Causes ----------

Cause	Size	Mag
0410-PCBs	14.10	M
0500-METALS	14.10	M
0560-Mercury	14.10	M
1700-PATHOGENS	15.40	M
2400-TOTAL TOXICS	33.70	T

---------- Nonattainment Sources ----------

Source	Size	Mag
0400-COMBINED SEWER OVERFLOW	15.40	M
0100-INDUSTRIAL POINT SOURCES	33.70	T
0200-MUNICIPAL POINT SOURCES	59.80	T
9000-SOURCE UNKNOWN	14.10	S

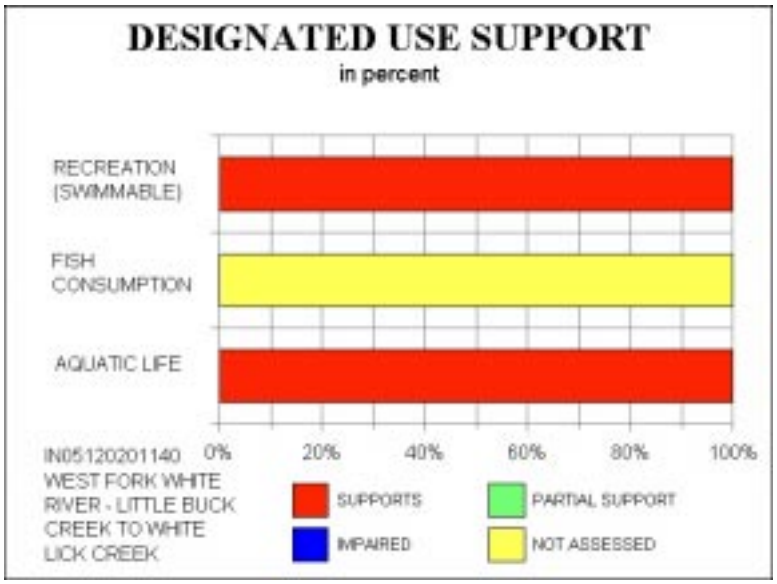
Overall Use Support Status Report
06-04-98

Waterbody ID : **IN05120201140** Segment Number: 00
Waterbody Name: W F White River Basin (Little Buck Cr to white Lick Cr)
Waterbody Type: River Size: 148.80 Miles
Basin: WHITE RIVER

Assessment Date: 9804

---------- Use Support ----------

Designated Use	Fully Supp	Threat	Partial Supp	Not Supported	Not Attained	Not Assessed
AQUATIC LIFE SUPPORT	98.40	49.40	0.00	0.00	0.00	0.00
FISH CONSUMPTION	0.00	0.00	0.00	0.00	0.00	148.80
SWIMMABLE	148.80	0.00	0.00	0.00	0.00	0.00



---------- Nonattainment Causes ----------

Cause	Size	Mag
0410-PCBs	19.60	M
0500-METALS	19.60	M
0560-Mercury	19.60	M
0300-PRIORITY ORGANICS	39.20	M

---------- Nonattainment Sources ----------

Source	Size	Mag
9000-SOURCE UNKNOWN	39.20	M

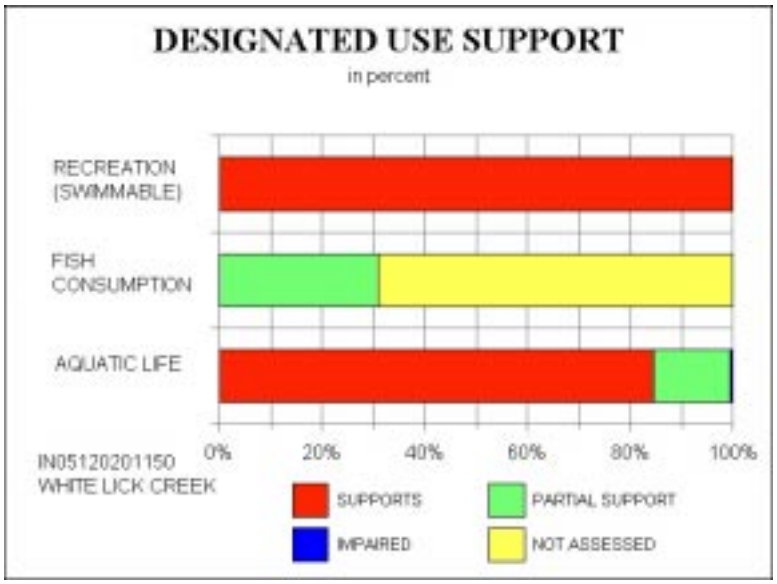
Overall Use Support Status Report
06-04-98

Waterbody ID : **IN05120201150** Segment Number: 00
Waterbody Name: White Lick Creek
Waterbody Type: River Size: 176.10 Miles
Basin: WHITE RIVER

Assessment Date: 9804

---------- Use Support ----------

Designated Use	Fully Supp	Threat	Partial Supp	Not Supported	Not Attained	Not Assessed
AQUATIC LIFE SUPPORT	35.10	114.00	26.00	1.00	0.00	0.00
FISH CONSUMPTION	0.00	0.00	54.50	0.00	0.00	121.60
SWIMMABLE	176.10	0.00	0.00	0.00	0.00	0.00



---------- Nonattainment Causes ----------

Cause	Size	Mag
0410-PCBs	54.50	S
0500-METALS	44.50	S
0560-Mercury	44.50	S
1600-HABITAT ALTER. (non-flow)	114.00	T

---------- Nonattainment Sources ----------

Source	Size	Mag
3000-CONSTRUCTION	114.00	T
3200-Land Development	114.00	T
9000-SOURCE UNKNOWN	54.50	S

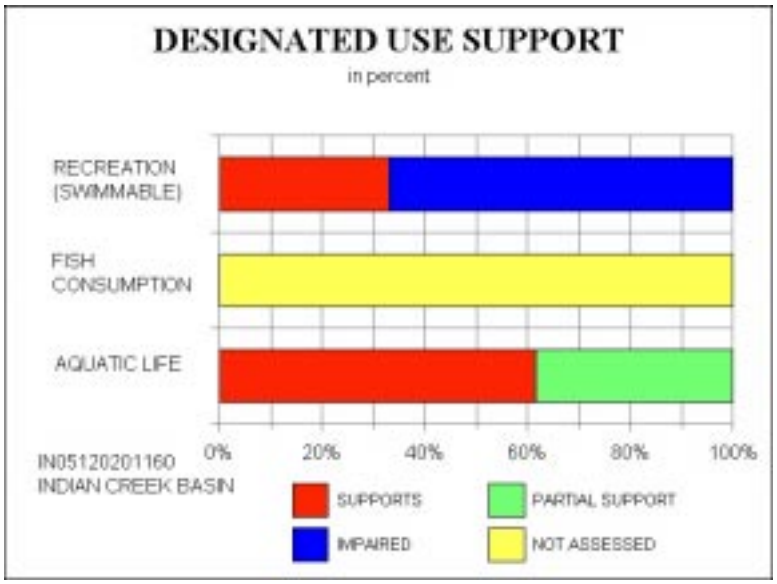
Overall Use Support Status Report
06-04-98

Waterbody ID : **IN05120201160** Segment Number: 00
Waterbody Name: Indian Creek Basin
Waterbody Type: River Size: 52.01 Miles
Basin: WHITE RIVER

Assessment Date: 9804

---------- Use Support ----------

Designated Use	Fully Supp	Threat	Partial Supp	Not Supported	Not Attained	Not Assessed
AQUATIC LIFE SUPPORT	32.00	0.00	20.00	0.00	0.00	0.00
FISH CONSUMPTION	0.00	0.00	0.00	0.00	0.00	52.00
SWIMMABLE	17.20	0.00	0.00	34.80	0.00	0.00



---------- Nonattainment Causes ----------

Cause	Size	Mag
1700-PATHOGENS	34.80	S
1600-HABITAT ALTER. (non-flow)	20.00	S

---------- Nonattainment Sources ----------

Source	Size	Mag
9000-SOURCE UNKNOWN	52.00	S

Overall Use Support Status Report
06-04-98

Waterbody ID : **IN05120201170** Segment Number: 00
Waterbody Name: W.F. White River Basin (White Lick Cr to Bean Blossom)
Waterbody Type: River Size: 109.07 Miles
Basin: WHITE RIVER

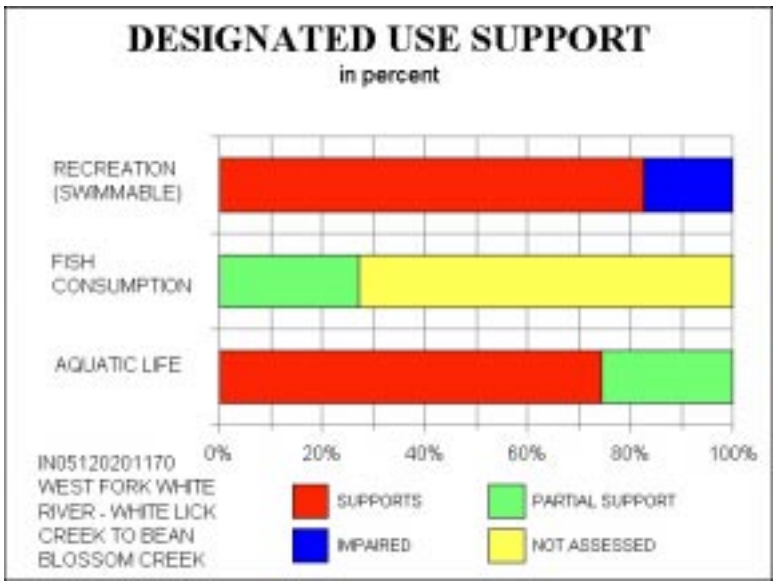
---------- Description of the Waterbody ----------

No description available

Assessment Date: 9804

---------- Use Support ----------

Designated Use	Fully Supp	Threat	Partial Supp	Not Supported	Not Attained	Not Assessed
AQUATIC LIFE SUPPORT	81.20	0.00	27.90	0.00	0.00	0.00
FISH CONSUMPTION	0.00	0.00	26.90	0.00	0.00	72.20
SWIMMABLE	90.20	0.00	0.00	18.90	0.00	0.00



---------- Nonattainment Causes ----------

Cause	Size	Mag
0410-PCBs	26.90	M
0500-METALS	26.90	S
0560-Mercury	26.90	S
1700-PATHOGENS	18.90	S

---------- Nonattainment Sources ----------

Source	Size	Mag
9000-SOURCE UNKNOWN	26.90	S

APPENDIX C

Potential Stakeholders in the Upper White River Watershed

Potential Stakeholders in the Upper White River Watershed

Boone County

Boone County Solid Waste Dist
201 Courthouse Sq
Lebanon, IN
765) 483-0687

Boone County Veterans Svc
Lebanon, IN
(765) 483-4480

Building Inspector
201 E Main St
Lebanon, IN
(765) 482-8845

Center Township Trustee
111 S Meridian St
Lebanon, IN
(765) 482-1550

County Of Boone
1300 E 100 S
Lebanon, IN
(765) 482-0750

County Surveyor
102 Courthouse Sq
Lebanon, IN
(765) 483-4444

Highway Garage
1955 Indianapolis Ave
Lebanon, IN
(765) 482-4550

Honorable J Detamore
112 Courthouse Sq
Lebanon, IN
(765) 482-6502

Honorable O Kincaid
307 Courthouse Sq
Lebanon, IN
(765) 482-0450

Honorable S David
310 Courthouse Sq
Lebanon, IN
(765) 482-0530

Boone Co. SWCD
801 West Pearl Street
Suite C
Lebanon, IN 46052
Ph: 765-482-6355

USDA
Natural Resources Conservation Service
801 West Pearl Street
Suite C
Lebanon, IN 46052
Ph: 765-482-6355

Mayors Office
201 E Main St
Lebanon, IN
(765) 482-1201

Memorial Park Barn
130 E Ulen Dr
Lebanon, IN
(765) 482-8863

Purdue Cooperative Extension
1300 E 100 S
Lebanon, IN
(765) 482-0750

US Consolidated Farm Svc
803 W Pearl St # A
Lebanon, IN
(765) 482-6355

Brown County

Brown County SWCD
121 Locsut Lane
P.O. Box 308
Nashville, IN 47448
Ph:812-988-2211

Brown County Department of Health
P.O. Box 281

Nashville, IN 47448
Ph: 812-988-2255

Delaware County

Delaware Co. SWCD
2904 Granville Avenue
Muncie, IN 47303
Ph: 765-747-5531

Building Commissioner
100 W Main St # 306
Muncie, IN
(765) 747-7799

Building Inspector
300 N High St
Muncie, IN
(765) 747-4862

Center Twp Trustee Office
1200 E Main St
Muncie, IN
(765) 288-8876

Code Enforcement
300 N High St
Muncie, IN
(765) 747-4718

Congressman David Mc Intosh
2900 W Jackson St
Muncie, IN
(765) 747-5566

County Council
100 W Main St # 309
Muncie, IN
(765) 747-7730

Delaware County Board-Health
100 W Main St # 207
Muncie, IN
(765) 747-7721

Delaware County Commissioners
100 W Main St # 309
Muncie, IN
(765) 747-7730

Delaware County Extension
100 W Main St # 202
Muncie, IN
(765) 747-7732

Delaware County Highway Engr
100 W Main St # 310
Muncie, IN
(765) 747-7765

Delaware County Surveyor
100 W Main St # 203
Muncie, IN
(765) 747-7806

Delaware County Zoning Adm
100 W Main St # 306
Muncie, IN
(765) 747-7777

Delaware Highway Garage
7700 E Jackson St
Muncie, IN
(765) 747-7818

Delaware-Muncie Board-Zoning
100 W Main St # 206
Muncie, IN
(765) 747-7740

Health Dept-Nurses Office
100 W Main St # 313
Muncie, IN
(765) 747-7814

Honorable Richard A Dailey
100 W Washington St
Muncie, IN
(765) 747-7784

Honorable Steven R Caldemeyer
100 W Washington St
Muncie, IN
(765) 747-7780

Monroe Township Trustee
2701 E County Road 700 S
Muncie, IN
(765) 282-2177

Muncie Building Commissioner
300 N High St
Muncie, IN
(765) 747-4862

Muncie City Engineer
300 N High St
Muncie, IN
(765) 747-4878

Muncie Community
Development
300 N High St
Muncie, IN
(765) 747-4825

Muncie Mayor
300 N High St
Muncie, IN
(765) 747-4845

USDA
Natural Resources Conservation Service
2904 Granville Avenue
Muncie, IN 47303
Ph: 765-747-5531

Hamilton County

Hamilton Co. SWCD
1108 South 9th Street
Noblesville, IN 46060
Ph: 317-773-432

County Commissioners Asst
1 Hamilton County Sq #
157
Noblesville, IN
(317) 776-9719

County Plan Commission
1 Hamilton County Sq #138
Noblesville, IN
(317) 776-8490

County Surveyor
1 Hamilton County Sq #146
Noblesville, IN
(317) 776-8495

Hamilton County 4-H
2003 Pleasant St
Noblesville, IN
(317) 776-0854

Hamilton County Council
1 Hamilton County Sq
Noblesville, IN
(317) 776-8557

Hamilton County Drainage
Board
1 Hamilton County Sq #
146
Noblesville, IN
(317) 776-9627

USDA
Natural Resources Conservation Service
1108 South 9th Street
Noblesville, IN 46060
Ph: 317-773-2181

Hamilton Co. Health Department
Suite 30
One Hamilton County Square
Noblesville, IN 46060
Ph: 317-776-8500

Noblesville City Hall
16 S 10th St
Noblesville, IN
(317) 776-6324

Noblesville Engineering Dept
16 S 10th St
Noblesville, IN
(317) 776-6325

Noblesville Mayor
16 S 10th St
Noblesville, IN
(317) 776-6324

Noblesville Planning Dept
16 S 10th St
Noblesville, IN
(317) 776-6325

Noblesville Township Trustee
836 Division St
Noblesville, IN
(317) 773-0249

Noblesville Wastewater Utility
197 Washington St
Noblesville, IN
(317) 776-6353

US Consolidated Farm Svc
408 S 9th St

Noblesville, IN
(317) 773-2181

Wayne Twp Trustee
13922 E 206th St
Noblesville, IN
(765) 534-4062

Hancock County

Hancock Co. SWCD
1101 West Main Street
Suite N
Greenfield, IN 46140
Ph:317-462-2283

USDA
Natural Resources Conservation Service
1101 West Main Street
Suite N
Greenfield, IN 46140
Ph:317-462-2283

Hendricks County

Center Township Trustee
115 S Washington St
Danville, IN
(317) 745-2813

Community Action-Indianapolis
247 S Wayne St
Danville, IN
(317) 745-2642

Danville Town Manager
147 W Main St
Danville, IN
(317) 745-3001

Danville Town Office
20 S Jefferson St
Danville, IN
(317) 745-5446

Danville Waste Water Treatment
1000 E Broadway St
Danville, IN
(317) 745-4928

Danville Water Co
147 W Main St
Danville, IN
(317) 745-4180

Hendricks County Bldg Permits
355 S Washington St # 212
Danville, IN
(317) 745-9255

Hendricks County Co-Op Ext
955 E Main St
Danville, IN
(317) 745-9260

Hendricks County Commissioner
355 S Washington St # 204
Danville, IN
(317) 745-9221

Hendricks County Engineer
355 S Washington St # 209
Danville, IN
(317) 745-9236

Hendricks County Highway Ofc
930 E Main St
Danville, IN
(317) 745-9227

Hendricks County Planning Comm
355 S Washington St # 212
Danville, IN
(317) 745-9254

Hendricks County Surveyor
355 S Washington St
Danville, IN
(317) 745-9237

Marion Twp Trustee
21 S State Road 75
Danville, IN
(317) 539-4024

US Consolidated Farm Svc
195 Meadow Dr
Danville, IN
(317) 745-2381

Hendricks County SWCD
195 Meadow Drive,
Suite 2
Danville, IN 46122
Ph: 317-745-2555

James Woody
IDNR Resource Specialist
195 Meadow Drive,
Suite 2
Danville, IN 46122
Ph: 317-745-2555

USDA
Natural Resource Conservation Service
195 Meadow Drive,
Suite 2
Danville, IN 46122
Ph: 317-745-2555

Henry County

Big Blue River Conservancy
1224 1/2 Broad St
New Castle, IN
(765) 529-7254

Building Comm Office
227 N Main St
New Castle, IN
(765) 521-6823

Henry County Co-Op Ext Agents
206 S 12th St
New Castle, IN
(765) 529-5002

Henry County Commissioners
101 S Main St
New Castle, IN
(765) 529-4705

Henry County Farm Svc Agen
146 E County Road 200
N # B
New Castle, IN
(765) 529-2303

Henry County Surveyor
111 S 12th St
New Castle, IN
(765) 529-4802

Henry Planning Commission
107 1/2 S 12th St
New Castle, IN
(765) 529-7408

New Castle Mayor
227 N Main St
New Castle, IN
(765) 529-7605

New Castle Sewage Treatment
10 Midway Dr
New Castle, IN
(765) 521-6836

Prairie Township Trustee
5492 N County Road 100E
New Castle, IN
(765) 836-4249

Henry County SWCD
146 East Co. Rd 200 North
Suite C
New Castle, IN 47362
Ph: 765-529-2303

Brenda Gettinger
IDNR Div. of Soil
146 East Co. Rd 200 North
Suite C
New Castle, IN 47362
Ph: 765-529-2303

USDA
Natural Resources Conservation Service
146 East Co. Rd 200 North
Suite C
New Castle, IN 47362
Ph: 765-529-2303

Johnson County

Franklin Mayor's Office
55 W Madison St
Franklin, IN
(317) 736-3602

Franklin Sewage Collection Ofc
796 State St
Franklin, IN
(317) 736-3641

Franklin Township Trustee
901 N Main St # C
Franklin, IN
(317) 736-7511

Franklin Waste Water
Treatment
796 State St
Franklin, IN
(317) 736-3640

James Farr
IDNR
Agricultural Conservation Specialist
3059 North Morton Street
Franklin, IN 46131
Ph: 317-736-6822

Johnson Cnty Plan Commission
1071 Hospital Rd
Franklin, IN
(317) 736-3723

Johnson County Extension Svc
80 S Jackson St
Franklin, IN
(317) 736-3724

Johnson County Health Dept
1071 Hospital Rd
Franklin, IN
(317) 736-3770

Johnson Co. SWCD
3059 North Morton Street
Franklin, IN 46131
Ph: 317-736-6822

US Consolidated Farm Svc
100 International Dr
Franklin, IN
(317) 736-6822

USDA
Natural Resources Conservation Service
3059 North Morton Street
Franklin, IN 46131
Ph: 317-736-6822

Madison County

Anderson Building Commissioner
120 E 8th St
Anderson, IN
(765) 648-6055

Anderson Business Office
120 E 8th St
Anderson, IN
(765) 648-6187

Anderson City Air Management
120 E 8th St
Anderson, IN
(765) 648-6158

Anderson City Engineering
120 E 8th St
Anderson, IN
(765) 648-6118

Anderson City Mayor
120 E 8th St
Anderson, IN
(765) 648-6000

Anderson Community Dev Dept
120 E 8th St
Anderson, IN
(765) 648-6097

Anderson Planning Dept
120 E 8th St
Anderson, IN
(765) 648-6163

Anderson Sewer Dept
2801 Gene Gustin
Way
Anderson, IN
(765) 648-6562

Anderson Township Trustee Ofc
1423 Central Ave
Anderson, IN
(765) 642-0267

Anderson Water Dept
550 Baxter Rd
Anderson, IN
(765) 648-6420

Anderson Water Pollution Cntrl
2801 Gene Gustin Way
Anderson, IN
(765) 648-6560

City Engineers Office
120 E 8th St

Anderson, IN
(765) 646-9670

Community Development Dept
120 E 8th St
Anderson, IN
(765) 646-9655

Congressman David Mc Intosh
1134 Meridian St
Anderson, IN
(765) 640-2919

E Central Ind Solid Waste Dist
4911 N State Road 9
Anderson, IN
(765) 640-2535

Edgewood Town Hall
3405 Nichol Ave
Anderson, IN
(765) 649-5534

Highway Garage
2830 W 8th St
Anderson, IN
(765) 646-9240

Honorable David Hopper
16 E 9th St
Anderson, IN
(765) 641-9490

Honorable Dennis Carroll
16 E 9th St # 404
Anderson, IN
(765) 641-9622

Honorable Frederick R Spencer
16 E 9th St
Anderson, IN
(765) 641-9436

Honorable Jack L Brinkman
16 E 9th St
Anderson, IN
(765) 641-9627

Honorable Thomas L Clem
16 E 9th St
Anderson, IN
(765) 641-9496

Honorable Thomas Newman Jr
16 E 9th St
Anderson, IN
(765) 641-9632

Lafayette Township Trustee
4817 N 150 W
Anderson, IN
(765) 642-3810

Madison Board Of Zoning Appls
16 E 9th St
Anderson, IN
(765) 641-9541

Madison Cnty Purdue Co-Op Extn
16 E 9th St # 303
Anderson, IN
(765) 641-9514

Madison County Board Of Health
206 E 9th St
Anderson, IN
(765) 641-9523

Madison County Commissioner
16 E 9th St
Anderson, IN
(765) 641-9474

Madison County Council-Govts
16 E 9th St # 100
Anderson, IN
(765) 641-9482

Madison County Drainage Board
206 E 9th St
Anderson, IN
(765) 641-9687

Madison Co. Cooperative Extension Service
16 East 9th Street
Anderson, IN 46016
Ph☹765) 641-9514

Madison Co. SWCD
1917 East University Blvd
Anderson, IN 46012
(765) 644-4249

USDA Natural Resource Cons. Service
1917 East University Blvd
Anderson, IN 46012
(765) 644-4249

Marion County

Eagle Creek Watershed
Matthew Dickey, Coord.
P.O. Box 1290
Indianapolis, IN 46206
Voice: (317)692-7846

Friends Of The White River
P.O Box 90171
Indianapolis, IN 46290
Ph: 317-767-4140

Marion Co. SWCD
6960 South Gray Rd
Suite C
Indianapolis, IN 46237
Ph: 317-780-1765

Marion City-County Council
200 E Washington St
Indianapolis, IN
(317) 327-4242

Marion County
Commissioners
200 E Washington St
Indianapolis, IN
(317) 327-3001

Marion County Health Dept
Dept. of Water Quality & Hazardous
Materials Management
3838 N. Rural Street
Indianapolis, IN 46205
(317) 221-2266

Upper White River Alliance, Inc
5335 N. Tacoma Avenue
Suite 6
Indianapolis, IN 46220

USDA
Natural Resources Conservation Service
6960 South Gray Rd
Suite C
Indianapolis, IN 46237
Ph: 317-780-1765

Advanced Utilities Systems
47 S Meridian St # 410
Indianapolis, IN

Harbour Water Corporation
1220 Waterway Blvd
Indianapolis, IN
(317) 631-1431

Indianapolis Water Corporation
1220 Waterway Blvd
Indianapolis, IN

Governor's Office
200 W Washington St
Indianapolis, IN
(317) 232-4567

Housing & Community Svc
402 W Washington St
Indianapolis, IN
(317) 232-7050

Indiana Senate
200 W Washington St
Indianapolis, IN
(317) 232-9400

Indianapolis Building Auth
200 E Washington St
Indianapolis, IN
(317) 327-4343

Indianapolis Chief's Office
50 N Alabama St # E208
Indianapolis, IN
(317) 327-6041

Indianapolis City Offices
1650 N College Ave
Indianapolis, IN
(317) 931-9598

Indianapolis Code Violations
604 N Sherman Dr
Indianapolis, IN
(317) 327-4163

Indianapolis Historic Preserve
200 E Washington St # 2060
Indianapolis, IN

(317) 327-4406

Zoning Code Compliance
604 N Sherman Dr
Indianapolis, IN
(317) 327-4115

Sierra Club
6140 N. College Avenue
Indianapolis, IN 46220

Monroe County

Monroe Co. SWCD
1931 Liberty Drive
Bloomington, IN 47403
Ph: 812-334-4318

Monroe Co. Health Department
119 West Seventh Street
Bloomington, IN 47404
Ph: 812-349-2542

IDNR Div of Soil
1931 Liberty Drive
Bloomington, IN 47403
Ph: 812-334-4318

USDA
Natural Resource Cons. Service
1931 Liberty Drive
Bloomington, IN 47403
Ph: 812-334-4318

Morgan County

Building Commission
180 S Main St # 204
Martinsville, IN
(765) 342-1060

City Government Engineering
59 S Jefferson St
Martinsville, IN
(765) 342-7800

City Of Martinsville
59 S Jefferson St
Martinsville, IN
(765) 342-2342

County Commissioners
180 S Main St # 112
Martinsville, IN
(765) 342-1007

County Surveyor's Office
180 S Main St
Martinsville, IN
(765) 342-1064

Fish Hatchery
2650 State Road 44
Martinsville, IN
(765) 342-5527

Martinsville Mayor's Office
59 S Jefferson St
Martinsville, IN
(765) 342-2861

Martinsville Sewage Treatment
995 Rogers Rd S
Martinsville, IN
(765) 342-2342

Martinsville Utilities Office
60 S Sycamore St
Martinsville, IN
(765) 342-2449

Martinsville Water & Sewage
410 W Cunningham St
Martinsville, IN
(765) 342-2815

Martinsville Water & Sewage
300 S Mulberry St
Martinsville, IN
(765) 342-2707

Morgan Monroe State Forest
6220 Forest Rd
Martinsville, IN
(765) 342-4026

Purdue Extension
180 S Main St # 229
Martinsville, IN
(765) 342-1010

Township Trustee
159 W Morgan St
Martinsville, IN

(765) 342-6368

US Consolidated Farm Svc Agcy
1328 Morton Ave # 2
Martinsville, IN
(765) 342-5594

Morgan Co. SWCD
1328 Morton Avenue
Suite 2
Martinsville, IN 46151
Ph: 765-342-5594

Morgan Co. Health Department
180 South Main Street
Suite 252
Martinsville, IN 46151
Ph: 765-342-6621

IDNR Div of Soil
1328 Morton Avenue
Suite 2
Martinsville, IN 46151
Ph: 765-342-5594

USDA
Natural Resource Cons. Service
1328 Morton Avenue
Suite 2
Martinsville, IN 46151
Ph: 765-342-5594

Owen County

Owen Co. SWCD
R.R. 5, Box 102
Spencer, IN 47460
Ph: 812-829-2605

Dale Walker
IDNR Div of Soil
R.R. 5, Box 102
Spencer, IN 47460
Ph: 812-829-2605

Randolph County

Randolph Co. SWCD
975 East Washington St.
Suite 2
Winchester, IN 47394
Ph: 765-584-4505

IDNR Div of Soil
975 East Washington St.
Suite 2
Winchester, IN 47394
Ph: 765-584-4505

Health Dept
211 S Main St
Winchester, IN
(765) 584-1155

Highway Garage
1204 S Huntsville Rd
Winchester, IN
(765) 584-2601

Randolph County Area Planning
100 S Main St # 207
Winchester, IN
(765) 584-8610

Randolph County Building Comm
Courthouse # 207
Winchester, IN
(765) 584-0275

Randolph County Community Dev
111 S Main St
Winchester, IN
(765) 584-3266

Randolph County Extension Ofc
1885 S US Highway 27
Winchester, IN
(765) 584-2271

Randolph County Surveyor
100 S Main St # 206
Winchester, IN
(765) 584-0609

US Consolidated Farm Svc
State Rd 32 E
Winchester, IN
(765) 584-4505

Ward Township Trustee Office
2885 E State 28
Winchester, IN
(765) 584-1546

USDA
Natural Resource Cons. Service
975 East Washington St.
Suite 2
Winchester, IN 47394
Ph: 765-584-4505

Tipton County

Cicero Township Trustee
115 N East St
Tipton, IN
(765) 675-4506

County Landfill
229 W 300 S
Tipton, IN
(765) 675-4535

Road Superintendent Garage
405 Market Rd
Tipton, IN
(765) 675-4508

Tipton County Commissioners
101 E Jefferson St
Tipton, IN
(765) 675-7921

Tipton County Extension Office
101 E Jefferson St
Tipton, IN
(765) 675-2694

Tipton County Farm Svc
243 Ash St
Tipton, IN
(765) 675-2316

Tipton County Health Dept
1000 S Main St
Tipton, IN
(765) 675-8741

Tipton County Solid Waste
957 E Jefferson St
Tipton, IN
(765) 675-9006

Tipton County Surveyor
101 E Jefferson St
Tipton, IN
(765) 675-2793

Tipton Water Dept
300 N East St
Tipton, IN
(765) 675-7736

Township Trustee
Fire Barn
Tipton, IN
(765) 675-7088

Waste Water Plant
909 E Jefferson St
Tipton, IN
(765) 675-2234

Tipton Co. SWCD
243 Ash Street
Suite B
Tipton, IN 46072
Ph: 765-675-2316

USDA
Natural Resource Cons. Service
243 Ash Street
Suite B
Tipton, IN 46072
Ph: 765-675-2316

State Upper White Watershed Stakeholders

Indiana Farm Bureau

225 S East St
Indianapolis, IN 46202

Indiana Department of Environmental Management

100 N. Senate Ave
P.O. Box 6015
Indianapolis, IN 46206-6015

IDEM Switchboard
(317) 232-8603 or (800) 451-6027

Agricultural Liaison	(317) 232-8587
Air Management	(317) 233-0178
Community Relations	(317) 232-8128
Compliance and Technical Assistance	(317) 232-8172
Criminal Investigations	(317) 232-8128
Enforcement	(317) 233-5529
Legal Counsel	(317) 232-8493
Media and Communication Services	(317) 232-8560
Pollution Prevention And Technical Assistance	(317) 232-8172
Solid and Hazardous Waste Management	(317)233-3656
Water Management	(317) 232-8670

Indiana Department of Natural Resources

402 West Washington Street
Indianapolis, IN 46204-2748

IDNR Field Representatives are located in the individual

Division of Engineering	(317) 232-4150
Division of Entomology And Plant Pathology	(317) 232-4120
Division of Fish & Wildlife	(317) 232-4080
Division of Forestry	(317) 232-4105
Division of Historic Preservation & Archaeology	(317) 232-1646
Division of Law Enforcement	(317) 232-4010
Division of Nature Preservation	(317) 232-4052
Division of Oil and Gas	(317) 232-4055
Division of Outdoor Recreation	(317) 232-4070
Division of Public Information and Education	(317) 232-4200
Division of Reclamation	(317) 232-1547
Division of Safety and Training	(317) 232-4145
Division of Soil Conservation	(317) 232-3870
Division of State Parks and Reservoirs	(317) 232-4124
Division of Water	(317) 232-4160

Indiana State Department of Health

2 North Meridian St
Indianapolis, IN 46204
(317) 233-1325

Federal Upper White Watershed Stakeholders

USDA Natural Resources Conservation Service

6013 Lakeside Blvd
Indianapolis, IN 46278
(317) 290-3200

NRCS Field Representatives are located in the counties.

U.S. EPA Region 5

77 West Jackson Blvd
Chicago, IL 60604
(312) 353-2000
(800) 632-8431

U.S. Army Corps of Engineers

Louisville District
Dr. Martin Luther King Jr. Place
Louisville, KY 40202

APPENDIX D

FUNDING SOURCES

FUNDING SOURCES

This listing of funding sources was derived from the November 1998 *Watershed Action Guide for Indiana*, which is available from the Watershed Management Section of IDEM.

FEDERAL CONSERVATION AND WATERSHED PROGRAMS

Environmental Protection Agency

Section 319, 604(b), and 104(b)3 Grants

Grants for conservation practices, water body assessment, watershed planning, and watershed projects. Available to non-profit or governmental entities. These monies, enabled by the Clean Water Act, are funneled through the Indiana Department of Environmental Management. *For details see IDEM below.*

U.S. Department of Agriculture (See county listings for local federal agency contacts.)

EQIP: Environmental Quality Incentive Program. Administered by the Natural Resources Conservation Service. Conservation cost-share program for implementing Best Management Practices, available to agricultural producers who agree to implement a whole-farm plan that addresses major resource concerns. Up to $50,000 over a 5- to 10-year period. Some parts of the state are designated Conservation Priority Areas and receive a larger funding allotments.

WRP: Wetland Reserve Program. Administered by the Natural Resources Conservation Service. Easement and restoration program to restore agricultural production land to wetland. Easements may be for 10 years, 30 years, or permanent. Longer easements are preferred. Partnerships with other acquisition programs are encouraged. Restoration and legal costs are paid by NRCS. Landowner retains ownership of the property and may use the land in ways that do not interfere with wetland function and habitat, such as hunting, recreational development, and timber harvesting.

CRP: Conservation Reserve Program. Administered by the Farm Service Agency with technical assistance from NRCS. Conservation easements in certain critical areas on private property. Agricultural producers are eligible. Easements are for 10 or 15 years, depending on vegetative cover, and compensation payments are made yearly to replace income lost through not farming the land. Cost share is available for planting vegetative cover on restored areas.

WHIP: Wildlife Habitat Incentive Program. Administered by the Natural Resources Conservation Service. Cost share to restore habitat on previously farmed land. Private landowners who are agricultural producers are eligible. Cost share up to 75%, and contracts are for 10 years.

FIP: Forestry Incentive Program. Administered by the Natural Resources Conservation Service. Cost-share to assist forest management on private lands. Funds may be limited.

U.S. Fish & Wildlife Service

Partners for Wildlife: assistance for habitat restoration.

STATE CONSERVATION AND WATERSHED PROGRAMS

IDNR Division of Soil Conservation

LARE: Lake & River Enhancement Program. Funds diagnostic and feasibility studies in selected watersheds and cost-share programs through local Soil & Water Conservation Districts. Project oversight provided through county-based Resource Specialists and Lake & River Enhancement Watershed Coordinators. Funding requests for Watershed Land Treatment projects must come from Soil & Water Conservation Districts. If a proposed project area includes more than one district, the affected SWCDs should work together to develop an implementation plan. The SWCDs should then apply for the funding necessary to administer the watershed project. Before applying for funding, the SWCDs should contact the Lake & River Enhancement Coordinators to determine (1) the appropriate watershed to include in the project, (2) if the proposed project meets the eligibility criteria, and (3) if funding is available.

IDNR Division of Fish & Wildlife

Classified Wildlife Habitat Program: Incentive program to foster private wildlife habitat management through tax reduction and technical assistance. Landowners need 15 or more acres of habitat to be eligible. IDNR provides management plans and assistance through District Wildlife Managers. See county listings.

Wildlife Habitat Cost-share Program: Similar to above.

IDNR Division of Forestry

Classified Forest Program: Incentive program to foster private forest management through tax reduction and technical assistance. Landowners need 10 or more acres of woods to be eligible. IDNR provides management plans and assistance through District Foresters. (See county listings.)

Classified Windbreak Act: Establishment of windbreaks at least 450 feet long adjacent to tillable land. Provides tax incentive, technical assistance through IDNR District Foresters.

Forest Stewardship Program & Stewardship Incentives Program: Cost share and technical assistance to encourage responsibly managed and productive private forests.

IDNR Division of Reclamation

Appalachian Clean Streams Initiative: Funds for acid mine drainage abatement.

IDNR Division of Nature Preserves

State Nature Preserve Dedication: Acquisition and management of threatened habitat.

IDEM Office of Water Quality

State Revolving Fund: Available to municipalities and counties for facilities development. Will be available in 1999 for nonpoint source projects as well. Funding is through very low-interest loans.

Section 319 Grants: Available to nonprofit groups, municipalities, counties, and institutions for implementing water quality improvement projects that address nonpoint source pollution concerns. Twenty-five percent match is required, which may be cash or in-kind. Maximum grant amount is $112,500. Projects are allowed two years for completion. Projects may be for land treatment through implementing Best Management Practices, for education, and for developing tools and applications for state-wide use.

Section 205(j) Grants, formerly called 604(b) Grants: Available to municipalities, counties, conservation districts, drainage districts. These are for water quality management projects such as studies of nonpoint pollution impacts, nonagricultural NPS mapping, and watershed management projects targeted to Northwest Indiana (including BMPs, wetland restoration, etc.)

Section 104(b)(3) Grants: These are watershed project grants for innovative demonstration projects to promote statewide watershed approaches for permitted discharges, development of storm water management plans by small municipalities, projects involving a watershed approach to municipal separate sewer systems, and projects that directly promote community based environmental protection. NOTE: the application time frame for IDEM grant programs is annually, by March 31st.

PRIVATE FUNDING SOURCES

National Fish and Wildlife Foundation

1120 Connecticut Avenue, NW Suite 900, Washington DC 20036. Nonprofit, established by Congress 1984, awards challenge grants for natural resource conservation. Federally appropriated funds are used to match private sector funds. Six program areas include wetland conservation, conservation education, fisheries, migratory bird conservation, conservation policy, and wildlife habitat.

Individual Utilities

Check local utilities such as IPALCO, CINergy, REMC, NIPSCO. Many have grants for educational and environmental purposes.

Indiana Hardwood Lumbermen's Association

Indiana Tree Farm Program

The Nature Conservancy

Land acquisition and restoration.

Southern Lake Michigan Conservation Initiative
Blue River Focus Area
Fish Creek Focus Area
Natural Areas Registry
Hoosier Landscapes Capitol Campaign

Conservation Technology Information Center (CTIC)

'Know Your Watershed' educational materials are available

Indiana Heritage Trust

Land acquisition programs

Ducks Unlimited

Land acquisition and habitat restoration assistance

Quail Unlimited

Pheasants Forever

Sycamore Land Trust

Acres Inc.

Land trust

Oxbow, Inc.

Land trust

SOURCES OF ADDITIONAL FUNDING OPPORTUNITIES

Catalog of Federal Funding Sources for Watershed Protection
EPA Office of Water (EPA841-B-97-008) September 1997

GrantsWeb: http://www.sra international.org/cws/sra/resource.htm

Attachment 1
U.S. Geological Survey
National Water-Quality Assessment Program

Congress appropriated funds in 1986 for the U.S. Geological Survey (USGS) to begin a pilot program in seven project areas to develop and refine the National Water-Quality Assessment (NAWQA) Program. In 1991, the USGS began full implementation of the program. The NAWQA Program builds upon an existing base of water-quality studies of the USGS, as well as those of other Federal, State, and local agencies. The objectives of the NAWQA Program are to:

- Describe current water-quality conditions for a large part of the Nation's freshwater streams, rivers, and aquifers.
- Describe how water quality is changing over time.
- Improve understanding of the primary natural and human factors that affect water-quality conditions.

This information will help support the development and evaluation of management, regulatory, and monitoring decisions by other Federal, State, and local agencies to protect, use, and enhance water resources (Hirsch, 1997).

The NAWQA Program is assessing the water-quality conditions of more than 50 of the Nation's largest river basins and aquifers, known as Study Units. Collectively, these Study Units cover about one-half of the United States and include sources of drinking water used by about 70 percent of the U.S. population. Comprehensive assessments of about one-third of the Study Units are ongoing at a given time. Each Study Unit is scheduled to be revisited every decade to evaluate changes in water-quality conditions. NAWQA assessments rely heavily on existing information collected by the USGS and many other agencies as well as the use of nationally consistent study designs and methods of sampling and analysis. Such consistency simultaneously provides information about the status and trends in water quality conditions in a particular stream or aquifer and, more importantly, provides the basis to make comparisons among watersheds and improve our understanding of the factors that affect water-quality conditions regionally and nationally (Hirsch, 1998).

The White River Basin in Indiana was among the first 20 river basins to be studied as part of the NAWQA Program between 1992 and 1996. The USGS has published several reports and fact sheets, which address chemical, biological, and human factors within the watershed. The following is a partial listing of information available from the USGS NAWQA studies.

- Circular 1150, Water Quality in the White River Basin, Indiana, 1992-96.
- Report 94-4024, Water-Quality Assessment of the White River Basin, Indiana: Analysis of Available Information on Pesticides, 1972-92.
- Report 96-4192, Water-Quality Assessment of the White River Basin, Indiana: Analysis of Selected Information on Nutrients, 1980-92.
- Report 96-653A, Fish Communities and Habitat Data at Selected Sites in the White River Basin, Indiana, 1993-95.
- Report 97-4260, Environmental Setting and Natural Factors and Human Influences Affecting Water Quality in the White River Basin, Indiana.
- Fact Sheet 110-96, Occurrence of Nitrate in Ground Water in the White River Basin, Indiana, 1994-95.
- Fact Sheet 96-4232, Fishes of the White River Basin, Indiana.

- Fact Sheet 058-97, Trends in Acetochlor Concentrations in the Surface Waters of the White River Basin, Indiana, 1994-96.
- Fact Sheet 119-96, Influence of Natural and Human Factors on Pesticide Concentrations in Surface Waters of the White River Basin, Indiana.
- Fact Sheet 233-95, Occurrence of Pesticides in the White River, Indiana, 1991-95.
- Fact Sheet 209-96, Assessment of Water Quality at Selected Sites in the White River Basin, Indiana, 1993 and 1995 Using Biological Indices.
- Fact Sheet 124-96, Radon in the Fluvial Aquifers of the White River Basin, Indiana, 1995.
- Fact Sheet 138-96, Occurrence of Volatile Organic Compounds in Ground Water in the White River Basin, Indiana, 1994-95.
- Fact Sheet 084-96, Occurrence of Pesticides in Ground Water in the White River Basin, Indiana, 1994-95.

For additional information on the NAQWA Program, contact:
Project Chief
White River Basin Study
U.S. Geological Survey
5957 Lakeside Boulevard
Indianapolis, IN 46278-1996
317-290-3333
or visit, http://in.water.usgs.gov/

References

Hirsch, R.M. *in* Fenelon, J.M., 1998, Water quality in the White River basin, Indiana, 1992-96: U.S. Geological Survey Circular 1150, 1p.

Hirsch, R.M. *in* Baker, N.T. and Frey, J.W., 1997, Fish community and habitat data at selected sites in the White River basin, Indiana, 1993-95: U.S. Geological Survey Open File Report 96-653A, Forward.

Attachment 2
Comments

MARION COUNTY
HEALTH DEPARTMENT
making a difference

1 12 PM '01

January 23, 2001

Ms. Susan McLoud
NRCS Water Quality Liaison
IDEM
OWM-Planning Branch
100 N. Senate Avenue
PO Box 6015, Room 1255
Indianapolis, IN 46206-6015

Re: Upper White River WRAS Comments

Dear Susan,

The Marion County Health Department appreciates the opportunity to make comments on the WRAS (IDEM, July 2000).

4.1.2 - Other Monitoring Efforts

MCHD/WQHMM has monitoring data, which should be included in the WRAS. This data is available on the MCHD website www.mchd.com, click on "Marion County Watershed Sampling". Many of the sampling points are selected with input from other stakeholders (Eagle Creek Watershed Task Force, Friends of White River, USGS, IDEM) so that work is coordinated and meets the needs of multiple stakeholder groups. MCHD's stream sampling records from 1992 are attached.

Appendix B

MCHD is concerned about the lack of data regarding fish consumption advisories. More State resources need to be dedicated to collect data to properly assess this public health issue. Once this data is collected, the public must be educated so they can make informed decisions about eating the fish caught in Indiana watersheds. To date, state resources to collect data and to educate the public does not meet the publics needs. For the purposes of this document more data about fish tissue provides more information about stream water quality.

3838 NORTH RURAL STREET
INDIANAPOLIS, INDIANA 46205
TELEPHONE (317) 221-2000

Appendix C - MCHD contact information correction:

Marion County Health Department
Department of Water Quality & Hazardous Materials Management
3838 N. Rural Street
Indianapolis, Indiana 46205
(317) 221-2266

PART II - Page 4

Paragraph 1

Marion County experiences similar problems described in Hamilton County in locating an adequate perimeter drain outlet.

Paragraph 3

MCHD currently does not require 3 acre lots for septic systems. This is a zoning (versus health code) requirement, subject to granting of variances. The city may ask the developer to incorporate scattered homes with septic systems when designing sewers. However, developers generally charge homeowners for connection. The homeowner fees are a percentage of the construction costs and are monitored by the city under a program known as the "15 year sewer". Many homeowners do not connect due to these costs. MCHD will require connection to a public sewer when their septic system fails.

Note: In Marion County, 17,000 to 20,000 homes still use septic systems. Failure rates for these systems are high and expected to increase as these 20-40 year old systems continue to age. The traditional method to extend sewers into Marion County's densely populated neighborhoods is to use the Barrett Law process. Assessment costs to homeowners using this process have ranged from $8,000 to $15,000 per "buildable lot". The majority of homeowners strongly object to these costs and 25% of homeowner's default on their mortgages in Barrret Law neighborhoods. This process places local officials in an increasingly unpopular position. While understanding the public health importance of extending public sewers, the decision-makers must face the wrath of homeowners who are literally "fighting for their home".

An improved way to finance public sewer connection is needed.

Page 5, Paragraph 1

MCHD agrees the enforcement of Rule V for all practical purposes does not exist. The state does not have adequate staff to approve plans, monitor work in progress or take enforcement actions. For example, a Marion County developer had approximately 100 deficiencies of Rule V noted during inspections conducted between 11-25-97 to 3-29-00. The fees assessed by IDEM were $18,500. Enforcement at this level equates to no enforcement. In addition to more staff, local and state officials need to move closer towards a "zero tolerance" policy on soil erosion control. Developers have been educated on the requirements, they choose not to comply and our water quality suffers.

Page 12 – 4.3

Strategy – "financial assistance" there is no real assistance available, what are you referring to?
MCHD believes state legislators need to be involved in the solutions such as tax credits for septic system repairs or public sewer connection. State appropriations for low/no interest loans to reduce financial burdens to homeowners and small businesses is needed to correct this identified public health risk.

Page 13 – 4.5

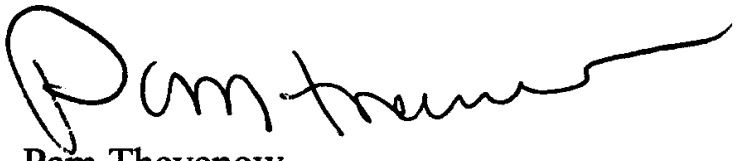
MCHD believes the public is not aware of the fish consumption advisories. An increased effort to educate the public about healthy choices is needed. An occasional newspaper article is not enough. State resources are needed to improve assessments, post advisory signs at known fishing spots, ensure information is available at W.I.C. sites, licensing facilities, public libraries, etc..

4.6 - MCHD agrees tackling NPS pollution is difficult, except in the Rule V enforcement. The state should conduct an annual assessment of compliance with Rule V by inspecting a representative sample of active sites throughout the state. Perhaps IDEM could partner with IDNR, SWCD, IDNR and local health departments to conduct these annual assessments. Such a report would easily reveal developers committed to soil erosion prevention.

Table 2-2 – include the scale. I assumed 1= good - 5= poor

Again, I appreciate the opportunity to comment on this important document. Please feel free to contact me if you have any questions at (317) 221-2266 or ptheveno@hhcorp.org.

Sincerely,



Pam Thevenow
Administrator
Department of Water Quality & Hazardous Materials Management

Pt:vp